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ABSTRACT

This handbook for state and local education agencies is intended as a reference to assist in initiating and/or improving follow-up systems or studies of former vocational students classified as special populations. The handbook is a complement to Evaluation Handbook: Guidelines and Practices for Follow-Up Studies of Former Vocational Students, Volume 1 (see Note). Sections 1, 2, and 3 provide a background on evaluation and followup and an overview of special populations which highlights definitional issues and defines the importance of evaluation and followup. Specific titles are Introduction; Evaluation and Follow-Up: Context, Definitions, Models, and Relationships; and Overview of Special Populations. Sections 4, 5, and 6 focus on the procedural steps required in designing, planning, implementing, and using follow-up studies (Issues and Strategies for Follow-Up of Special Populations, Procedures and Practices for Follow-Up Studies, and Using Follow-Up Data and Studies). Where appropriate, citations are made to Volume 1 and information or textual material is taken from that document to support this volume. Other sections include a glossary, annotated bibliography, and appendixes including sample materials and follow-up questionnaires, forms, and interview guides. (YLB)

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# EVALUATION HANDBOOK

## VOLUME 2:

## GUIDELINES AND PRACTICES FOR FOLLOW-UP STUDIES OF SPECIAL POPULATIONS

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1979

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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## FOREWORD

The concern for providing effective and efficient education and employment and training programs for special populations (women, minorities, limited English-speaking, disadvantaged, and handicapped) stems from the basic right of individuals to equal educational and employment opportunity. Federal legislation over the past two decades reaffirms this belief and progress toward achieving equal opportunity for special populations remains a high priority.

Vocational educators responsible for the development and administration of programs for special populations must emphasize the importance of evaluation. To validly assess program efficiency and effectiveness they must use the best evaluation methods and techniques. Moreover, evaluation of vocational education must be a continuous process in which the primary objective is providing data and information for improving the processes and products of vocational education. The presentation of follow-up as a subsystem of a comprehensive evaluation effort concentrates on the collection of data and information for program improvement.

Recognizing the need to improve vocational education follow-up studies, the Bureau of Occupational and Adult Education, under terms of the U. S. Office of Education contracted with The National Center for Research in Vocational Education to develop two handbooks on follow-up studies. This handbook on follow-up studies of special populations is a complement to Evaluation Handbook: Guidelines and Practices for Conducting Follow-up Studies, Volume One.

The handbook is designed to stimulate dialogue, change, and improvement in vocational education for special populations. It is specifically addressed to program administrators, evaluators, and other professionals engaged in this important work.

This volume does not provide absolute answers for improving follow-up studies but it does identify current problems and issues along with existing practices which have proved successful. Obviously, there is a continuing

need for improvement in defining efficient and effective techniques and practices. To this extent, this effort is viewed as one process for improving follow-up studies of special populations.

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Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

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# SECTION 1

# INTRODUCTION

## SECTION 1

## INTRODUCTION

During the 1960's and early 1970's concerns were raised about evaluation and follow-up. Questions asked included:

- What is comprehensive evaluation and what is follow-up?
- What is the relationship between evaluation and follow-up?
- What constitutes effective and efficient evaluation or follow-up?
- What are the outcomes of evaluation or follow-up?
- What are commonalities and differences between state education agency evaluation or follow-up and local education agency evaluation or follow-up?
- How do we use the data and information from evaluation or follow-up?

These basic questions were often raised and more complex ones discussed. As a result of these concerns and the discussions which followed, the definitions, purposes, practices and utility of evaluation or follow-up seem to be in flux and transition. However, the need to improve the evaluation process and use the outcomes from that effort is paramount.

The evaluation of vocational education is essential for its continuance and improvement. State and local requirements for cost-effective education have been given more attention in recent years. Declining financial resources and a fluctuating labor market demand have caused educators to be more responsive to the need for evaluation.

Further, the importance is magnified in the current federal vocational legislation. Requirements for formal evaluation procedures and accountability reports are documented.

This section provides a framework for the development of a rationale for the design, conduct and use of follow-up studies of special populations. The definition of "follow-up" as a subsystem of a "comprehensive evaluation system" is highlighted. Three basic issues considered important for the development of a rationale include:

- o A definition of follow-up
- o Purposes for conducting a follow-up study
- o Relationships between follow-up studies for non-special populations and for special populations receiving vocational education

## A Definition of Follow-up

The definitions of follow-up are many and varied. They vary with respect to vocational program area, teacher, local administrator, state administrator or program person, and federal administrators. However, there is a common theme evident in most definitions. Good's description seems to capture that commonality:

> an organized plan for ascertaining the employment and educational status of graduates from vocational programs in order to establish the relationship between employment and the vocational training received.[1]

The only correction which should be offered to that definition is the substitution of "former vocational education students--completers, leavers, and dropouts" for graduates. For the purposes of this handbook follow-up is defined simply as the "collection of information about program completers, leavers, and dropouts."

Good defined a follow-up study as:

(1) a study made in order to achieve one or more of the following purposes:

(a) to determine the effectiveness of the guidance process,

(b) to obtain a realistic picture of what lies ahead for present students,

(c) to help former students reappraise their educational and vocational plans,

(d) to appraise the school's program,

(e) to obtain ideas for improving the program, and

(f) to obtain information that the school requires to adapt its adult education program to meet more efficiently the needs of its former students and the community,

(2) evaluation of progress of persons in jobs or training to which they have been assigned, on the basis of certain measuring instruments and procedures.[2]

The concept of "follow-up" may be better understood when placed in a broader context. Follow-up is a subsystem of a comprehensive evaluation system perceived as having methods and techniques for assessing the outcomes of a vocational education program. Like all other evaluation techniques, the follow-up studies are designed to gather and provide useful information for decision-making. Therefore, a major goal of evaluation is to improve the program or activity being examined.

## Purposes for Conducting Follow-up Study

As the importance of vocational training becomes more fully recognized and as more tax dollars are being invested in vocational education, precise and accurate information is being demanded by those individuals responsible for approving program expenditures. Moreover, as vocational administrators are being held increasingly accountable for their actions, the need for documentation of program effectiveness becomes imperative.

This thrust is evident in the states' reporting requirements of the Education Amendments of 1976. Further, the proposed National Center for Educational Statistics' Vocational Education Data System (VEDS) reflects the increased concern for follow-up studies which can provide indices for measuring vocational program effectiveness.

The discussion below highlights the purpose for conducting follow-up studies from two perspectives: the program improvement perspective and the legislative perspective. Although the two perspectives are interrelated, in that program improvement is a major intent in the federal legislation, many individuals from the state and local education agencies view the legislative perspective as one which focuses on data collection for compliance.

The program improvement perspective focuses on the need for reliable and valid evaluation data. Local and state administrators need these data to help in making program decisions concerning subject matter content, instructional methods, instructional personnel, etc. And the need to improve the decision-making process continues to be a high priority. The evaluation literature shows that the primary purpose of evaluation is to facilitate decision-making. Edwards, Guttentag and Snapper in defining the importance and relationship of evaluation to decision-making process state: "Evaluations, we believe, exist (or perhaps only should exist) to facilitate decision-making."[3]

The legislative perspective in the past and present decade is characterized by the need to report the attainments of vocational education programs to state and federal government. However, vocational educators still find it difficult to obtain the required information and report it accurately. Lack of a fully developed data collection and dissemination system was considered one of the major limitations in obtaining and reporting vocational education data in the past decade.[4] More recently, a report of the Committee on Education and Labor of the U. S. House of Representatives states:

> the lack of adequate data has hampered attempts at evaluation of the effectiveness of the vocational education programs by Congress and has hampered the program administrators from offering courses most directly related to job demand. The truly unfortunate thing about this situation is that it is a failing which could have been avoided years ago.[5]

There is a continuing concern about the lack of complete and reliable information regarding the ways in which federal, state and local funds are used to realize the basic purposes of federal vocational education policy. Previous to the enactment of the 1976 Act, a 1974 Government Accounting report stated that Congress had observed repeatedly that information about vocational education was

inadequate for the purpose of formulating public policy and ascertaining whether programs are working properly.[6] Moreover, the findings concerning the need for accountability and the mandates in the Education Amendments of 1976 concerning vocational education evaluation require a comprehensive evaluation system. One vital and necessary activity for both state and local vocational education agencies in supporting a comprehensive evaluation system is that of follow-up.

The need for evaluation, particularly with the focus on outcome evaluation, is emphasized in the Education Amendments of 1976:

> Public Law 94-482, Title II Vocational Education, Section 112 (b) (1) states, "In order for the states to assist local educational agencies and other recipients of funds in operating the best possible programs of vocational education--
>
> (A) each state shall, during the five-year period of the state plan, evaluate the effectiveness of each program with the state being assisted with funds available under this Act; and the results of these evaluations shall be used to revise the state's programs, and shall be made readily available to the state advisory council; and
>
> (B) each state shall evaluate, by using data collected, wherever possible, by statistically valid sampling techniques, each such program within the state which purports to impart entry level job skills according to the extent to which program completers and leavers--
>
> (i) find employment in occupations related to their training, and
>
> (ii) are considered by their employers to be well-trained and prepared for employment, except that in no case can pursuit of additional education or training by program completers or leavers be considered negatively in these evaluations.
>
> (2) Each state, in formulating its plans to fulfill these requirements, shall annually consult with the state advisory council which shall assist the state in developing these plans to monitor the evaluations conducted by the state, and use the results of these evaluations in compiling its annual report required by Section 105."

The legislation also requires that attention be given to vocational education programs for special populations (e.g., disadvantaged, handicapped, minorities, limited English speaking, and women). Follow-up information about special populations must, at the minimum, be based on the same evaluation criteria as for all vocational students.*

The number of follow-up studies of special populations in the literature is limited. In cases where studies appear, the focus is generally upon the handicapped (e.g., hearing impaired, visually handicapped). Given the diversities of the special populations, many questions about conducting follow-up studies are raised when special populations are under consideration. Examples of questions commonly asked include: What is the most efficient and effective method for gathering data or information? What constitutes a "good questionnaire"? and How do you increase the response rate? These questions in regard to follow-up of the special populations are similar to those addressing the follow-up of non-special populations.

## Commonalities and Differences Between Follow-up Studies of Special and Non-Special Vocational Education Students

There are unique characteristics which apply to each special population. Follow-up studies of special populations are similar in design--sampling, data and information, data analysis, and reporting techniques. But certain procedures or techniques may vary based upon the characteristics of each special population. Typically, respondents are asked standard questions about their current job: number of hours employed, wages or salary, job functions--some reflections about their vocational preparation, instructors, etc. But there are other important types of information that should be gathered in order to aid in making decisions about the vocational education program. An exhaustive list of inquiries could never be developed because each vocational education program has its own needs. The following questions, however, illustrate some special data concerns for follow-up of special populations:

- Is the female head of the household unable to find a job because she is unable to find day care services? Does she lack self-confidence because she never was employed or it has been a number of years since she was employed?

---

*See Section 014.402, Federal Regulations, October 7, 1976.

- Is the economically disadvantaged student unable to find a job because she/he cannot afford the transportation to and from work?

- Is the academically disadvantaged student unable to find a job because she/he cannot complete the application or pass the employer's employment test?

- Is the handicapped student unable to work because physical barriers (e.g., the lack of ramps) eliminate available opportunities? Because the work station is not adjusted to meet her/his handicap?

- Is the limited English-speaking person unable to obtain a job because she/he cannot complete a job application or cannot work as a member of a team because of communication difficulties?

A major focus of these questions is on the obtaining and/or retaining of a job. Other questions may be raised regarding the quality of vocational preparation.

Just as the training needs are sometimes different for those who comprise the special population, the data collection needs and strategies may also differ. For example, severely handicapped students may not be able to complete a mailed questionnaire. Economically disadvantaged persons are often considered to be hard to locate. Therefore, a larger sample size or an Unequal Probabilities of Selection (UPS) procedure is needed to aid in obtaining reliable and valid data.

Thus, it is evident that techniques or tasks of the follow-up process as traditionally designed may need to be modified in order to collect the most useful and reliable data on vocational education programs for special populations. Moreover, limited literature on vocational education follow-up studies of special populations and the increasing demands by local, state and federal agencies for evaluation and accountability data indicate the need for increased follow-up efforts.

Handbook Content

This handbook is based upon the existing literature relative to follow-up studies, evaluation, and special populations, and information obtained from individuals working in the area of special population evaluation. It is not designed to be the definitive document on the subject, but to raise questions, to identify possible issues, and provide guidelines and practices for improving the conduct of follow-up studies. By doing this we hope to facilitate the efforts of state and local persons for improving the decisions on vocational education for special populations.

The handbook complements Evaluation Handbook: Guidelines and Practices for Follow-up Studies, Volume One. The ideas and concepts identified in Volume One are applicable to those follow-up tasks defined in this handbook focusing on the special populations.

The primary difference between Volume One and this volume is the overall explication of the similarities and differences in methods and procedures for designing, planning and conducting the follow-up study. The definition of data analysis and use of follow-up information and data is basically the same for both the special populations and the non-special populations--the determination of efficiency, effectiveness and relevancy of vocational education and the use of that information to support the decision-making process for vocational education program improvement.

Further, this handbook is intended to assist state education agency (SEA) and local education agency (LEA) persons who have an interest in or responsibilities for the evaluation of programs for special populations. It is not a step-by-step procedural manual; but it is a "ready reference" for identifying tasks, and best practices for accomplishing these required tasks. And it provides guidelines for assessing one's effectiveness in the evaluation process according to accepted practices. As such, it is important that the definition of follow-up as an integral part of the comprehensive evaluation be highlighted. Section II provides that detail.

## Using the Handbook

Purpose. This handbook provides exemplary follow-up study strategies and procedures for personnel in state and local education agencies. Moreover, a major objective is to assist those educational agencies in initiating and/or improving follow-up systems or studies of former vocational students classified as special populations.

The handbook attempts to synthesize concepts, identify best practices and materials from the current state of the art rather than add significant new knowledge. In support of this aim, an attempt has been made to systematically survey the literature on follow-up, evaluation and special populations; interview leading practitioners at the state and local level; examine relevant laws and regulations; and review exemplary follow-up systems and instruments. The effort became one of making rational order of the existing literature and follow-up efforts and presenting the best techniques, approaches, and concepts in one resource book.

Audience. The target audience for this handbook is varied. Potential users include, but are not limited to, state and local vocational administrators (at all levels), policy makers for vocational programs, program funding agents, and state and local vocational program staff directly responsible for the operation of a follow-up system or study.

Naturally, not all of the handbook's sections are equally important to each member of such a varied group of users. The educational policy maker has different needs from a program staff member responsible for the collection of evaluation or follow-up data.

Many users may be in need of information on how to improve an existing follow-up system. Thus, it is recommended that the initial task of the reader be to examine the Table of Contents and decide which Section or Subsections are most relevant to her or his needs, or review and complete the "Checklist for Assessing Individual Problems" and the "Follow-up Study Profile" in this subsection.

To the extent possible, each section of the handbook has been written to provide readers with enough relevant information about major concepts, alternative strategies and procedures, and substantive content to make informed decisions on which step or approach to perform next. Additionally, key references have been incorporated into the text to assist in this task.

Organization. As a "ready reference", this handbook is divided into nine sections and many subsections. Section 1, 2, and 3 provide a background on evalaution and follow-up, and an overview of special populations highlighting definitional issues and defining the importance of evaluation and follow-up. Sections 4, 5, and 6 focus on the procedural steps required in designing, planning, implementing and using follow-up studies.

Each section in the handbook is self-contained. The reader can expect to become familiar with the major concepts, alternative approaches (where applicable), and techniques associated with the topic of each section. A number of sections make repeated references to legislative citations and state and local programmatic concerns. This is done with the intent of making each section self-contained based on the need for that type of information to support the particular content of the section or subsection. Also, where appropriate citations are made to Evaluation Handbooks: Guidelines and Practices for Follow-up Studies, Volume One, and information or textual material is taken from that document to support this volume focusing on special populations.

Within each section are major references or sources for further information. The sections are further divided by subsections denoted with topical side headings. This handbook, as with Volume One, is not an instructional system with objectives, pretest learning materials, and posttests for each section. Rather, the major organizational construct employed in the development of this document was that it be a "ready reference" on the topic of follow-up of former vocational students classified as special populations.

The "Checklist for Assessing Individual Problems" provides a means of identifying and prioritizing follow-up study problems.

## Checklist for Assessing Individual Problems

| Do these problems exist for you? | | | Rank Order by Extent of Problem |
|---|---|---|---|
| Yes | No | | |
| ____ | ____ | 1. Lack of understanding of purpose for doing evaluation or follow-up. | ____ |
| ____ | ____ | 2. Lack of definition and communication of objectives for conducting follow-up studies. | ____ |
| ____ | ____ | 3. Lack of knowledge of strategies and procedures for doing follow-up of special populations. | ____ |
| ____ | ____ | 4. Lack of clear definitions essential for collecting reliable and valid follow-up data. | ____ |
| ____ | ____ | 5. Inability of people to use follow-up data in decision-making. | ____ |
| ____ | ____ | 6. Unwillingness of people to use follow-up data for program planning, policy making, or evaluation. | ____ |
| ____ | ____ | 7. Lack of understanding of federal, state or local education agency follow-up data requirements. | ____ |

Follow-up study profile. The handbook is organized around the follow-up profile which appears on page fourteen. The profile presents the major steps for designing, planning, conducting, and using follow-up studies by highlighting critical decisions or input. It contains major questions that persons involved in designing, planning, conducting, and/or using follow-up studies should ask.

The profile is designed to help you:

- o think through the follow-up study process
- o become familiar with follow-up study issues that you might not have considered
- o identify potential elements of your follow-up study plan that need improvement
- o gain an overview of the contents of the handbook
- o decide which sections of the handbook you should study in-depth, read carefully, or skim

The profile is simple to complete. In the left hand column, rate your current knowledge about each of the questions concerning follow-up studies:

| Current Knowledge | | | | |
|---|---|---|---|---|
| None | | Partial | | Full |
| 1 | 2 | 3 | 4 | 5 |

The page numbers in the right hand column refer to the section of the handbook which provides more detailed information about each question. An example appears below.

| Current Knowledge<br>None Partial Full<br>1 2 3 4 5 | | Page(s) |
|---|---|---|
| . . \ . . . | 1. *Issues.* What are commonalities and differences between follow-up studies for special and non-special vocational students? | 6, 7 |
| . . \ . . . | 2. *Legislative Requirements.* What are the federal legislative mandates for follow-up of special populations? | 51, 52 |
| . . \ . . . | 3. *Instruments.* What type(s) of follow-up instruments should be developed, adopted or adapted for special populations? | 76, 87, 171 |

## Follow-up Study Profile

| Current Knowledge<br>None Partial Full<br>1 2 3 4 5 | | Page(s) |
|---|---|---|
| . . . . . | 1. *Definition.* What is an acceptable definition of follow-up? | 2 |
| . . . . . | 2. *Purpose.* What are the local, state and federal follow-up study needs? | 3, 53 |
| . . . . . | 3. *Evaluation Context.* What is the importance of defining an evaluation context for follow-up? | 19 |
| . . . . . | 4. *Models.* How can evaluation models support the design of a follow-up study? | 24 |
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4. Advisory Council on Vocational Education, The Bridge Between Man and His Work. Report of the Council for the U. S. Office of Education (Washington, D. C.; 1969), p. xxviii.

5. U. S. House of Representatives, Committee on Education and Labor. Hearings on the Vocational Education Amendments of 1976 (Washington, D. C.: U. S. Government Printing Office, 1975), p. 39.

6. Comptroller General of the United States, What Is the Role of Federal Assistance to Vocational Education? (Washington, D. C.; 1974), p. 32.

SECTION 2

# EVALUATION AND FOLLOW-UP: CONTEXT, DEFINITIONS, MODELS AND RELATIONSHIPS

## SECTION 2

## EVALUATION AND FOLLOW-UP: CONTEXT, DEFINITIONS, MODELS AND RELATIONSHIPS

This section focuses on a discussion of evaluation. The narrative highlights the importance of defining an evaluation context, identification of evaluation definitions, and a brief presentation of evaluation models. Also, attention is given to the relationship between evaluation and follow-up. Specifically, follow-up is considered a subsystem of a comprehensive evaluation system. Follow-up studies are typically viewed as one form of product evaluation.

By providing this background information on evaluation and follow-up, a logical basis can be defined for appropriate follow-up procedures and techniques.

### Vocational Education and Special Populations

Prevocational and vocational training of the special populations has become a matter of increasing concern to vocational educators in recent years. Moreover, the federal legislation and a focus on humanitarian principles has created interest among many groups. Teachers, parents, students, administrators, legislators, employers, and the general public have shown an increasing concern toward improving the educational opportunities and labor market experiences of those individuals defined as special populations. These special populations as defined in the Education Amendments of 1976 include: (1) women, (2) members of minority groups, (3) handicapped persons, (4) disadvantaged persons, and (5) persons of limited English-speaking ability. It should be noted that this listing of special populations is not all inclusive. There are individuals and educational agencies who include other subpopulations, such as the gifted and ex-offenders in their special populations' definition.

Interest and efforts, in varying degrees of success and intensity, have been directed toward the many and varied problems associated with meeting the needs of the special populations. Problems include the inaccessibility of vocational curricula and physical facilities, inadequacies in the development of appropriate and adequate work experience

programs, uncertainty about the age at which to admit students to a prevocational or vocational program, inadequate career counseling and job placement services, insufficient methods for evaluating work potential and adaptability, and absence of valid follow-through and follow-up procedures.

The challenge for vocational educators is to overcome the attitudinal, programmatic, and physical facility barriers that exist, and in so doing, to develop a new level of awareness regarding the critical need to facilitate the special populations' participation in the total educational system. Obviously, the requirement for comprehensive evaluation of existing program efforts to assist in meeting the needs of the special populations is paramount.

As the vocational educator is exposed to public media and reads professional literature regarding the evaluation of vocational programs for specific populations, she or he finds questions such as:

1. What is vocational education for special populations?

2. What evaluation methods and models are appropriate for special populations?

3. Against what standards should programs for special populations be evaluated?

4. How can one evaluate the relative merits of several components of a course or curriculum designed for special populations?

5. What data and information from an evaluation or follow-up should be used to assess the effectiveness of course offerings for special populations?

One of the controversies in education today relates to the purposes of evaluation and the proper uses to which it should be put. Parallel to this general concern is the overriding issue of the priority assigned to evaluation within vocational education, and, more specifically, the definition of an evaluation context for the vocational education programs serving special populations to support the follow-up phase of evaluation.

## An Evaluation Context

Context is defined as "the part or parts of a written or spoken passage preceding or following a particular word or group of words and so intimately associated with them as to throw light upon their meaning."[7]

The general context of vocational education evaluation and follow-up studies in particular is defined through (1) a definition of the purpose of the vocational program, (2) the objectives and activities related to and necessary for achieving the purpose, (3) and organizational factors involved in the administration and management of those activities.

Evaluation has taken on added significance with the passage of the Education Amendments of 1976. The prescriptive nature of the 1976 Act--i.e., requiring the evaluation of all vocational programs within a five-year period has caused concern among many vocational educators.* Questions of financial and personnel resources to perform or accomplish effective and efficient evaluation, along with the question, "When is it most appropriate to do evaluation?" have surfaced as major concerns. Also, the problems of the lack of comprehensiveness and the non-systematic approach to evaluation continue to plague the vocational education community. There have been several reasons for this lack of attention:

1. Evaluation receives lower priority than other activities.
2. Evaluation is threating to many educators.
3. Evaluation receives minimal financial support.
4. Program developers do not consider evaluation as one of their responsibilities.
5. Program developers often are not adequately prepared to conduct evaluations.

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*See the Federal Regulations, October 7, 1976: Sections 104.401 through 104.405 and the requirements for the preparation of the accountability report, Section 104.241.

Further delineations of the problems which have contributed to the vocational educators' marginal enthusiasm for comprehensive evaluation, were highlighted in a National Seminar on Research in Evaluation of Occupational Education at North Carolina State University.

1. The goals and objectives of vocational education have not been succinctly stated or clearly defined.

2. There are few valid and reliable instruments for assessing behavioral change.

3. The outcomes of vocational education are diverse and difficult to measure.

4. Evaluation results frequently are not used as information by management.[8]

Wall highlights a negative perception of some individuals and offers a positive view for vocational educators responsible for special populations' program operations:

> "In too many instances, evaluation has been misconstrued as a final judgmental process. Such a view creates tremendous resistance on the part of project personnel who operate programs for disadvantaged and handicapped persons. Evaluational efforts always should be directed toward measurements that will aid in diagnosis as well as clarify and improve program direction."[9]

However, the federal, state and local requirements demand greater evidence of accountability for tax dollars spent on education, and this has led to a greater concern and need for evaluation in a comprehensive and systematic manner. This concern gained momentum in the early 1970's, and reached a high point in vocational education with the passage of the Education Amendments of 1976.

Moreover, the concern was not limited to vocational education; it appeared that all social science areas were experiencing a sudden interest in evaluation. Flaherty and Morell identified four causes of this sudden spurt in the growth of evaluation:

1. Greater requirements for accountability in publicly funded programs,

2. Increasing interest among social scientists in social relevance,

3. A decrease in financial resources for the traditional social sciences, and

4. An expansion in the social science methodologies, appropriate for research in applied settings.[10]

Factors affecting an evaluation definition. An individual's job responsibilities may have a major influence on one's definition of evaluation. The local or state administrator, the curriculum or program specialist, the pupil personnel director, the teacher, the parent, advisory council member, and state board of education member may all perceive evaluation within and based upon their individual roles and functions.

For one person, evaluation may have a negative connotation--a process which identifies what is wrong and who is doing it--a personal indictment. For another, it may have a positive connotation which can be defined as a process which improves program efforts or individual performance.[11]

One would suspect that for jobs which involve critical tasks, like major decision-making, evaluation would be defined in the positive sense--a process which assists in improving existing conditions and outcomes. However, there is little evidence to support this hypothesis. There are many other possible variables affecting one's perspective in defining evaluation. Common themes or ideas do, however, appear in most definitions.

Evaluation: a definition or definitions? The word evaluation has many definitions. Good offers the following:

1. The process of ascertaining or judging the value or amount of something by use of a standard or appraisal; includes judgments in terms of internal evidence and external criteria;

2. The process of determining the relative significance of phenomena of the same sort in terms of some standard (psych);

3. The consideration of evidence in the light of value standards and in terms of the particular situation and the goals which the group of individuals is striving to attain;

4. A judgment of merit, sometimes based solely on measurements, such as those provided by test scores, but more frequently involving the synthesis of various measurements, critical incidents, subjective impressions, and other kinds of evidence weighed in the process of carefully appraising the effects of an educational experience.[12]

Evaluation may be viewed as a process which supports decision making. Stufflebeam, et al. identify this trend, defining evaluation as "the process of delineating, obtaining, and providing useful information for judging decision alternatives."[13]

Evaluation is also considered to be an evolving field. Although many view evaluation as something unique and separate, others see it as no more than a mixture of concepts and techniques from different fields, qualified because there are a few concepts and techniques which seem to have been created specifically for the needs of evaluation.[14] According to Struening, "the field of evaluation has not produced a well developed applied science complete with a comprehensive set of constructs and their reliable and valid measures. Nor has it developed a systematically acquired body of knowledge acceptable to the scientific community and sufficiently general to apply in a variety of settings without question."[15]

Vocational education evaluation, as a result of the passage of the 1976 Act, has received added attention. The prescriptive nature of the Act in various sections outlines evaluation mandates for vocational educators. The state and local education agencies and their various advisory committees or councils are given well-defined evaluation tasks and responsibilities.

To summarize the criteria used in defining those evaluation responsibilities, it could be stated that vocational educators are required to determine program quality based on three criteria--effectiveness, efficiency, and relevancy. These criteria are essential not only to the evaluation of vocational education for non-special populations, but also for special populations.

The specific mandates from the Education Amendments of 1976 in regard to the evaluation activities by the state board (Section 112 (b) (1), 20 U. S. C. 2312) require that during the five-year period of the State Plan the state board evaluate in quantitative terms the effectiveness of each formally organized program or project supported by federal, state, and local funds. These evaluations should be in terms of:

"(a) Planning and operational processes, such as:

(1) quality and availability of instructional offerings;

(2) guidance, counseling, and placement and follow-up services;

(3) capacity and condition of facilities and equipment;

(4) employer participation in cooperative programs of vocational education;

(5) teacher/pupil ratios; and

(6) teacher qualifications.

(b) Results of student achievement as measured, for example, by:

(1) standard occupational proficiency measures;

(2) criterion referenced tests; and

(3) other examinations of students' skills, knowledge, attitudes, and readiness for entering employment successfully.

(c) Results of student employment success as measured, for example, by:

(1) rates of employment and unemployment;

(2) wage rates;

(3) duration of employment; and

(4) employer satisfaction with performances of vocational education students as compared with performance of persons who have not had vocational education."

In summary, the evaluation context requires definition and understanding by those persons responsible for or users of vocational education evaluation data and information. It is important that these individuals recognize this general context of vocational education evaluation and in particular follow-up studies as defined through (1) a definition of the purpose of the vocational program--federal, state, local definitions, (2) the activities related to and necessary for achieving the administration and management of these necessary activities. From this understanding and definition of the evaluation context, one can identify and/or adapt an evaluation model. Although many models exist there is a representative sample which have been more widely used than others. The following subsection identifies the selected models considered appropriate for designing, planning and conducting follow-up studies.

Evaluation Models

The following narrative attempts to offer the reader a brief description of the definitions and purposes of certain evaluation models. The information was obtained from a number of sources to which the reader is referred for further definition and information.

This section is intended to provide the reader with a logical basis for identifying an evaluation model which may assist her/him in defining appropriate evaluation or follow-up procedures and techniques.

Behavioral objectives models. Ralph Tyler designed this approach which is sometimes referred to as the Goal-Attainment Model (GAM). This model is described as a curriculum evaluation model only. Although widely used, it is not a total program evaluation model. The process involves: (1) analyzing objectives (i.e., behaviorally stated objectives) to identify and clarify them, (2) identifying situations that will give the student a chance to express the behavior related to the content, (3) developing instruments that will record (measured by norm-referenced or criterion-referenced tests) the behaviors, (4) analyzing the amount of change that occurs, and (5) analyzing the program in terms of its effectiveness in helping students achieve their objectives.

Another model under this classification is the Discrepancy Model. This model was designed by Malcolm Provus and evaluates the comparison of performance with standards. Specifically, the process evaluates by:

(1) defining program standards, (2) determining whether a discrepancy exists between an aspect of program and the actual performance based on standards for that aspect of the program, and (3) use of the discrepancy information to change performance or program standards. The model consists of four stages--design, installation, process, and product.

Goal Free Evaluation (GFE). In contrast to goal based evaluation where the evaluator is concerned with the quality of an educational program's goals and the extent to which those goals are achieved, GFE focuses on the outcomes of a program (both intended and unintended). The GFE process starts without referring to the goals or objectives of a program. The basis for determining which data to collect is the need(s) for which the program were designed. Actual effects are then compared with these needs rather than with the program goals. Michael Scriven, the originator of GFE, has not recommended GFE as a replacement for behavioral objectives evaluation, but as a complement. Ideally, both behavioral objectives evaluators and GFE evaluators would be used in the evaluation design.

Decision Making. The Context, Input, Process, and Product (CIPP) Model introduced by Daniel Stufflebeam and Egon Guba represents four types of evaluation--Context, Input, Process, and Product. The model is based upon the premise that evaluation activities are performed in order to aid decision-making. Thus, the four types of evaluation correspond to four major types of decisions--planning, structuring, implementing, and recycling. These relationships are given below.

| Decision | Evaluation |
|---|---|
| Planning (to determine objectives) | Context (needs assessment) |
| Structuring (to design procedures) | Input (program design) |
| Implementing (to utilize and refine procedures) | Process (feedback, monitoring) |
| Recycling (to judge and react to attainments) | Product (summative-type evaluation) |

The Center for Study of Evaluation (CSE) Model, developed by Marvin Alkin, is similar to the CIPP Model in that it also strives to use evaluation as an aid in decision-making. The major difference is a substantial reconceptualization of "process evaluation" in the CIPP Model. Whereas the CIPP evaluators focused on procedural considerations during process evaluation, the CSE Model encourages the evaluator to look at products designed at that point in addition to processes. Thus, the CSE Model consists of the following steps: (1) needs assessment, (2) program planning, (3) implementation evaluation, (4) program evaluation, and (5) outcome evaluation.

To provide a sample of models and a classification scheme, a number of sources were reviewed. A recent classification scheme offered by House* includes eight major evaluation models: systems analysis, behavioral objectives, decision making, goal free, criticism, accreditation, adversary, and transaction. Steele, in defining evaluation methods for programs in disadvantaged adults, identified over fifty models.** They are summarized in Figure 2-1. For additional information, the reader is encouraged to review the following sources:

Primary Sources:

Tyler, Ralph W. Basic Principles of Curriculum and Instruction. (Chicago: University of Chicago Press, 1950).

Scriven, Michael. "Pros and Cons about Goal Free Evaluation," Evaluation Comment, 3, No. 4 (December, 1972), pp. 1-4.

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*The reader is referred to the article by Ernest R. House, "Assumptions Underlying Evaluation Models," Educational Researcher, Vol. 7, No. 3, March 1978, pp. 4-12.

**Sara M. Steele has identified fifty models for evaluation. The term model is used in the broadest sense. She states that these models, approaches or frameworks, are adopted from processes that were used; others are designed as general ways of conceptualizing evaluation. She adds that few of the authors would consider their materials "models" in either the theoretical or the "ideal" sense, yet all provide ideas to the programmer in helping her or him set evaluation strategy.

**Figure 2-1**

**An Overview of Selected Evaluation Models***

| Model** | Designer | Summary | Use |
|---|---|---|---|
| Behavioral Objectives | | | |
| Goal Attainment | Ralph W. Tyler | Evaluation is concerned with determining whether education is actually producing the results that it sets out to achieve as indicated by statements of objectives. | The model can be used in any program that has objectives. However, it usually is most successful when there is evidence that the objectives are realistic and the program input great enough to make it logical to expect results. |
| Discrepancy Evaluation | Malcolm Provus | Standards are set for proper performance. Actual performance is compared with the standards and discrepancies or areas for improvement identified. | The model is particularly useful in checking out pilot or new programs, diagnosing problems with programs that are not functioning well, and improving program efficiency. |
| Goal Free | | | |
| Goal Free Evaluation | Michael Scriven | Program results are judged against the originating need. | The model is helpful in situations where objectives are not clear or are are unrealistic. It is also helpful as a means of examining objectives to assess the potential (determine limitations) of the program. It complements the goal based evaluation. |

**Figure 2-1 – continued**

| Model** | Designer | Summary | Use |
|---|---|---|---|
| Decision Making | | | |
| Context, Input, Process, Product | Daniel Stufflebeam | Four types of evaluation—context, input, process and product correspond to four kinds of decisions—planning, structuring, implementing, and recycling. | The model can be used through the program process. |
| Center for Study of Evaluation | Marvin Alkin | Five evaluation stages are suggested which will aid decision making. | The model can be used through the program process. |

*Adapted from: Steele, Sara M. *Contemporary Approaches to Program Evaluation.* Syracuse, New York: ERIC Clearinghouse on Adult Education, no date.

**Classification of models adapted in part from House, Ernest R. "Assumptions Underlying Evaluation Models," *Educational Researcher,* Vol. 7, No. 3, March 1978, pp. 4-12.

Stufflebeam, Daniel L., et al. Educational Evaluation and Decision Making (Itasca, Illinois: F. E. Peacock Publishers, Inc., 1971).

Alkin, Marvin C. "Evaluation in Theory Development," Evaluation (Berkeley, California: McCutchan Publishing Co., 1971).

Summary Sources:

Popham, W. James. Educational Evaluation (Princeton, New Jersey: Prentice Hall, Inc.,1975).

Steele, Sara M. Contemporary Approaches to Program Evaluation (Syracuse, New York: ERIC Clearinghouse on Adult Education, May 1973).

Worthen, Blaine R. and Sanders, James R. Educational Evaluation: Theory and Practice (Worthington, Ohio: Charles A. Jones Publishing Company, 1973).

Summary

The multiple concerns for satisfying the needs of the special populations has dramatically increased since the landmark 1963 vocational education legislation. The mood of society has shown a more humanitarian interest and a broader perspective of the problems. The recognition of special populations which have expanded in definition to include not only the disadvantaged and handicapped, but also minorities, women and limited English-speaking, has brought about increased efforts to develop viable programs to address those problems which deny equal opportunities for those individuals in the labor market.

These problems include the accessibility of vocational curricula and physical facilities, inadequacies in the development of appropriate and adequate work experience programs, uncertainty about the age at which to admit students to a prevocational or vocational program, inadequate career counseling and job placement services, insufficient methods for evaluating work potential and adaptability, and absence of valid follow-through and follow-up procedures.

Certainly the need for comprehensive evaluation of existing efforts to meet the needs of the special populations is paramount especially in the federal legislation. However, the definition problems surrounding evaluation

and the methodological constraints in conducting effective evaluation continue to exist. But this should not preclude those responsible for meeting the programmatic needs of the special populations from establishing and/or developing comprehensive evaluation systems. Even though the evaluation field is considered to be in an evolving stage, strategies, procedures and methods proven to obtain results exist, which can meet existing evaluation needs. Conducting a follow-up study is one phase of a comprehensive evaluation system which can serve the need.

## NOTES TO SECTION 2

7. Philip Babcock. Webster's Third New International Dictionary: Unabridged (Springfield, Massachusetts: G & D Merriam Co., 1967), p. 462.

8. North Carolina State University. National Seminar on Research in Evaluation of Occupational Education (Raleigh, North Carolina: Center for Occupational Education, 1968), p. 269.

9. James E. Wall. Impact of Vocational Education and Manpower Training on Target Populations: Ethnic Groups, the Disadvantaged, Handicapped Unemployed, and Unemployable Adults, Project Baseline Report (Flagstaff, Arizona: Northern Arizona University, 1974), p. 10.

10. Eugene W. Flaherty, and Jonathan A. Morell. "Evaluation: Manifestations of a New Field," Evaluation and Program Planning, Vol. 1, No. 1, (January 1978), p. 3.

11. Daniel Stufflebeam, et al. Educational Evaluation and Decision Making. Report of Phi Delta Kappa National Study Committee on Evaluation (Itasca, Illinois: F. E. Peacock Publishers, Inc., 1971), p. 40.

12. Dictionary of Education, p. 220.

13. Stufflebeam, et al., Educational Evaluation, 1971.

14. Flaherty and Morell, Evaluation: Manifestations, p. 5.

15. Elmer L. Struening. "Social Area Analysis as a Method of Evaluation," Handbook of Evaluation Research, Vol. I, by Elmer L. Struening and Marcia Guttentag, eds. (Beverly Hills, California: Sage Publications, 1975), pp. 519-20.

SECTION 3

# OVERVIEW OF SPECIAL POPULATIONS

## SECTION 3

## OVERVIEW OF SPECIAL POPULATIONS

The overview is intended to define the special populations primarily within the context of past and present legislation, and vocational programmatic efforts responsive to that legislation.

Each special population will be discussed in turn. The format for these sections is: definition, legislation, and existing vocational education programs for special populations.

Throughout this handbook, special populations are identified as those requiring modified programs and support services to succeed in regular vocational education programs. Beyond the functional element of this commonly accepted definition, there appears to be very little uniformity or consistency in legislative and regulatory definitions of these populations.

The Education Amendments of 1976 designate five special populations: disadvantaged, handicapped, limited English-speaking, minorities, and women. Yet a cursory review of the education literature reveals a plethora of terms used to label and classify special populations. It is interesting to note, furthermore, that while the gifted or talented are presently not included in the federal definition of special populations, twenty-one states have legislation which includes this group within their definition of special populations.[16]

In light of federal reporting requirements for follow-up studies of vocational education programs for special populations, the need for a common base of definitions (which could feasibly be attached to local labels) is critical. The overview in this section is intended to identify four of the special populations, primarily in accord with recent legislation, and to feature certain vocational education program efforts responsive to that legislation.

Disadvantaged and Minorities

The disadvantaged population is highly representative of ethnic/racial minorities and white populations at the poverty income level. Commonly accepted definitions identify with ethnic/racial minorities from the following subpopulations:

- o Black Americans
- o Hispanics

  Mexican Americans
  Puerto Ricans
  Cubans
  Latin Americans

- o American Indians

  Including Alaskan Natives or Aleuts
  Hawaiians

- o Appalachian Whites
- o Asian Americans

The disadvantaged can be characterized by some combination of:

1. Concentration in central city slums or rural depressed areas;
2. Low family incomes and low educational attainment of parents;
3. Unfamiliarity by personal experience or role models with the values and customs of the world of work;
4. Disillusionment and frustration with and rejection of or by the existing school system;
5. Restricted time horizons and limited ambitions imposed by unfamiliarity with the world's opportunities and a conditional disbelief in its promise;
6. Over-representation among minority youth.[17]

Disadvantaged and minorities and legislative action. Both federal and state governments have been increasingly aware of the welfare needs of the disadvantaged. Their passage of legislation has given higher priority to

initiating, among other educational efforts, special vocational programs and services for persons with academic, socio-economic, cultural, or other handicaps that prevent them from entering and progressing in the labor market.

The Vocational Education Amendments of 1968 defined disadvantaged as:

> persons who have academic, socio-economic, cultural, or other handicaps that prevent them from succeeding in vocational education or consumer and homemaking programs designed for persons without such handicaps, and who for that reason require specially designed educational programs or related services. The term includes persons whose needs for such programs services result from poverty, neglect, delinquency, or cultural or linguistic isolation from the community at large, but does not include physically or mentally handicapped persons, unless such persons also suffer from the handicaps described in this paragraph.

More recently, the Education Amendments of 1976 define disadvantaged as:

> persons (other than handicapped persons) who have academic or economic handicaps and who require special services and assistance in order to enable them to succeed in vocational education programs, under criteria developed by the Commissioner based on objective standards and the most recent available data.

Disadvantaged and vocational education. The following information presents a brief status review of the disadvantaged in vocational education based on findings of The National Center for Research in Vocational Education for the school year 1975-76. Enrollments reported for disadvantaged students increased to 1,873,304 (5.2 percent). As a result, disadvantaged represented a slightly larger percentage of total enrollment. These figures do not reflect those mainstreamed without services provided from specially designated funds over the years. The reported percentage of total vocational funds spent on disadvantaged has remained very stable over the years. Since the records do not include mainstreamed students, it seems likely that vocational educators are allocating and reporting their expenditures for special classes and services to assure they have met the legislative requirements. Once they have

satisfied these requirements, they do not attempt to report other services for the disadvantaged being provided from regular funding in regular classes. Methods are needed to determine the extent to which these services as well as special populations services are being provided.[18]

## Handicapped

A handicapped person is one who has a physical or mental impairment. Categorical definitions of handicapped persons identified in the Educational Amendments of 1976 include:

- Mentally retarded
- Hard of hearing
- Deaf
- Speech impaired
- Visually handicapped
- Seriously emotionally disturbed
- Orthopedically impaired
- Other health impaired
- Deaf-blind
- Multi-handicapped
- Specific learning disability*

Handicapped and legislative action. A major breakthrough in legislation designed to aid the handicapped came in 1963 with the Mental Retardation Facilities and Community Mental Health Centers Construction Act. The Elementary and Secondary Education Act of 1965, although not designed specifically for the handicapped, provided massive funding for the education of the handicapped. In 1966, Title VI was added to the Elementary and Secondary Education Act making it explicit that states take responsibility for initiation, expansion, and improvement of programs for handicapped children. In 1968, three acts

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*See Section 7, Glossary, for further explanation of these terms.

were passed by Congress having impact on the education of the handicapped: P.L. 90-480 sought to eliminate architectural barriers to the physically handicapped; the Handicapped Children's Early Education Assistance Act was targeted to preschool children; and the 1968 Amendments to the Vocational Education Act provided that ten percent of allotments to states must be used for the handicapped. The Rehabilitation Act of 1973 is similar in intent and language to the Civil Rights Act of 1964 and Title IX of the Education Amendments of 1972. While the latter bar race and sex discrimination respectively, the Rehabilitation Act bars discrimination against the handicapped individual in all programs which receive federal aid. The Education of the Handicapped Amendments of 1974 (P.L. 93-380) increased federal funding for education of the handicapped and introduced the concept of mainstreaming. The Education for All Handicapped Children Act of 1975 (P.L. 94-142) expanded upon P.L. 93-380 and mandated stricter compliance. These major pieces of legislation are summarized in Table 3-1.

Handicapped and vocational education. A report on Project Baseline, which was based upon a twelve state survey for the 1974-75 school year, notes that handicapped students comprised 1.66 percent of the total enrollments in vocational education. Of those served, 75.4 percent were at the secondary level, 12.4 percent at the adult level, and 12.3 percent at the postsecondary level. Handicapped students appeared to be concentrated in occupational home economic (7.18 percent), distributive education (2.65 percent), trade and industry (1.68 percent), and consumer and homemaking programs (1.55 percent). The report notes that without knowing the particular programs in these areas in which most handicapped students are enrolled, it is reasonable to suspect they are headed for low or non-salaried careers. It was also reported that there was no evidence of any increase in the proportionate numbers of handicapped students receiving vocational education. The actual numbers served were relatively small, but the handicapped as a percentage of the total vocational education enrollment continued to go down. Thus, "enrollment data . . . shows that the primary beneficiaries of vocational education have been middle class, academically average students. By comparison, . . . the handicapped have been greatly underrepresented in vocational education."19

The Vocational Education subpart of the Education Amendments of 1976 requires states to meet the following conditions:

**Table 3-1**

**Legislative Actions Affecting the Education of the Handicapped**

| Legislation | Mental Retardation Facilities and Community Mental Health Centers Construction Act (1963) | Rehabilitation Act of 1973 | Education of the Handicapped Amendments of 1974 | Education for All Handicapped Children Act of 1975 |
|---|---|---|---|---|
| Coverage | | All programs which receive federal aid | | All programs receiving funds under the Act |
| Provisions | 1 Amended prior legislation to train professional personnel in all recognized categories of handicap.<br>2) Funding for R & D projects in all categories of handicap. | Bans discrimination against the handicapped. | • "Bill of Rights for the Handicapped."<br>• Introduced the philosophy of mainstreaming.<br>• Clarified a child's right to free public education regardless of the severity of handicap.<br>• Increased federal funding. | • Mandates publicly supported education for all handicapped (between the ages of three and eighteen by 1978 and three and twenty-one by 1980).<br>• Requires school officials to develop an individualized education program for every handicapped child. |
| Agency Administering the Action | HEW | HEW (Office for Civil Rights) | USOE, HEW | BEH, USOE, HEW |

- Give assurances that federal vocational set aside monies for the handicapped will be used in a manner consistent with the goals of P.L. 94-142. The state plan for vocational education must be consistent with the state plan for education of the handicapped.

- Give assurances that the handicapped have equal access to the programs and services available to the non-handicapped.

- Describe programs and services to be provided for the handicapped and match these federal monies on a 50/50 basis.

- Insure representation of the handicapped on national and state vocational advisory councils for vocational education.[20]

Some states have developed alternative strategies for providing vocational education services to the handicapped. For example, in Michigan, state leaders in special education and vocational education have cooperatively developed several program options for serving the handicapped. The alternatives developed appear in Table 3-2.[21]

Limited English-speaking and Bilingual

This designation applies to any member of a national origin minority who does not speak and understand the English language in an instructional setting well enough to benefit from vocational studies to the same extent as a student whose primary language is English. Some examples of national origin minorities are Mexican, Portugese, Vietnamese, Chinese, and Puerto Rican.

Limited English-speaking and legislative action. The massive educational reform triggered by the Elementary and Secondary Education Act of 1965 was the first systematic effort to identify and treat the educational deficiencies of students with problems stemming from inadequate control of the English language. The earliest such efforts were typically labeled ESL or English as a Second Language.[22]

These early components of Title I were soon augmented by more comprehensive thrusts of federal funding under the 1967 amendments to P.L. 89-10 which created Title VII, the Bilingual Education Program. Under this program, the concept of instructional intervention was enlarged from the ESL focus to a multi-component program including staff development, community involvement, and development of instructional materials.[23]

Table 3-2

Vocational Alternatives Available
for the Handicapped in Michigan

| Type of Program | Description |
|---|---|
| Regular Education | Regular vocational education or general high school programs are used for all handicapped students who can benefit from placement. All students receiving non-instructional special education services (speech, social work, occupational therapy, special materials like talking books, etc.) are placed in these programs. |
| Adapted Vocational Education | Regular vocational programs are altered to accommodate eligible special education students who could not otherwise be placed in the program. Special materials and instructional aids are examples of adapting the program. This alternative may be needed for handicapped persons assigned to teacher consultants or special education resource rooms who need adapted instruction. |
| Special Vocational Education | Training is usually of a semi-skilled nature (such as custodial training, nurses' aides) or introductory skills training (electronics, auto mechanics, secretarial) designed to provide prerequisite skills for entry into a regular vocational education sequence or to provide entry level job skills. It is designed for handicapped persons whose disability precludes integration into a regular vocational education program. It is usually limited to handicapped students assigned to self-contained special education programs. |
| Individual Vocational Training | Training in special programs (such as MDTA, apprenticeship training) approved by a governmental agency, or a unique individual training program (such as outboard motor repair, tailoring, inhalation therapy) designed to fit a handicapped student's special interests and not generally available in the geographic area. This program may be used for any special training needs. Community training stations may be used so long as students do not become employees and are not paid a wage. |

Table 3-2, continued

| Type of Program | Description |
|---|---|
| Prevocational Evaluation Services | Designed for students whose disability precludes the use of the regular education sequence for obtaining vocational assessment. The service is provided in a sheltered workshop authorized by the U.S. Department of Labor to provide this service. Placement is limited to six months by U.S. Department of Labor rules. This is diagnostic service and not an instructional program. |
| Work Activity Center Services | Designed exclusively to provide work therapy for impaired persons whose handicaps are so severe as to make their productivity capacity inconsequential. The program must be licensed as a sheltered workshop by the U.S. Department of Labor. |
| Work Study Services for Students Who Have Not had Vocational Education | Available to any special education student who is within one year of termination due to age, or who has notified the school of plans to drop out. Students must be employed and paid a legal wage. |

Limited English-speaking and vocational education. In 1971-72, nearly 6 percent of all vocational students were Hispanic. This percentage is probably higher than the percentage of Hispanic people in the total population. Three years later, Hispanic students comprised 5.7 percent of the vocational education students.[24]

A 1976 study identified ninety-eight vocational training programs for bilingual students. The largest number of programs operated in California (37), while twenty-seven states operated none. The frequency distribution by states appears in Table 3.3.[25]

**Table 3-3 Bilingual Vocational Training Programs**

| Number of Programs | States | Percent of Total |
|---|---|---|
| 0 | 29 | 58% |
| 1-3 | 14 | 28% |
| 4-6 | 5 | 10% |
| 7-10 | 0 | 0 |
| 11-13 | 0 | 0 |
| 14-17 | 1 | 2% |
| over 17 | 1 | 2% |
| Total | 50 | 100% |

Under the Bilingual Education Act, 500 local education agencies have received funds to improve the educational opportunities for students in sixty-eight language groups, and to expand educational access for more than 300,000 children of non or limited English-speaking ability. In postsecondary education programs, one hundred institutions of higher education will offer teacher training and retraining to an estimated 25,000 classroom teachers and teacher aides. To develop a more effective coordinating relationship between the federal government and state education agencies, forty-three state agencies will receive assistance contract money to carry out bilingual education coordinating services within the state. As a means of insuring a growing and adequate supply of relevant and quality instructional materials, fifteen Materials Development Centers and three Assessment/Dissemination Centers have been funded to support and meet the needs of rapidly increasing bilingual education programs.[26]

The Education Amendments of 1976 require that 20 percent of the vocational education allocation be expended on the disadvantaged and limited English-speaking. This requirement authorizes the establishment of remedial programs for the limited English-speaking.

## Women

Women and legislative action. Several federal laws and executive orders have been passed to protect women from discrimination in education and employment. The Equal Pay Act of 1963 prevents sex discrimination in the payment of wages for equal work and in overtime and fringe benefits. Title VII of the Civil Rights Act of 1964 forbids discrimination in public and private companies and educational institutions employing fifteen or more workers. The law applies to hiring or firing, wages, fringe benefits, assignments, promotions, working conditions, and employment privileges. Executive Order 11375, a revision of Executive Order 11246, requires a government contractor employing fifty persons or more and whose contracts total more than $50,000 to have a written affirmative action program on file. Title IX of the Education Amendments of 1972 prevents all public and many private educational institutions from discriminating against women in admissions, federal financial assistance, assignment, and staff employment practices.[27] Table 3.4 identifies the provisions of these actions.

The Education Amendments of 1976 require states to detail their action against sex bias and sex stereotyping in vocational education. The Act provides supportive services targeted for women who prepare to enter non-traditional jobs, displaced homemakers, single heads of households who lack adequate skills, and homemakers who work part-time but seek to work full-time. It requires states to develop five-year plans that include provisions for equal access to men and women in vocational education efforts. Funds may also be allocated for national programs in research, curriculum development, guidance and counseling, etc. aimed at overcoming sex bias and sex stereotyping.

Women and vocational education. Steele's Project Baseline report shows that in 1973, women accounted for over 55 percent of all vocational education students.[28] The distribution of women by educational level appears below:

| | Percent of Total Vocational Education Enrollments | Percent of Women in Vocational Education Programs at Each Level |
|---|---|---|
| Secondary | 63 | 67 |
| Postsecondary | 11 | 40 |
| Adult Education | 26 | 46 |

**Table 3-4**

**Legislative Action Affecting Women in Education and Employment Opportunities**

| Legislation | Title VII of the Civil Rights Act of 1964 as Amended by the Equal Employment Opportunity Act of 1972 | Executive Order 11246 as Amended by 11375 | Equal Pay Act (Amendments of 1972) | Title IX of the Education Amendments of 1972 |
|---|---|---|---|---|
| Coverage | All employers with 15 or more employees, employment agencies, and labor organizations. | All organizations holding federal contracts or subcontracts of $10,000 or more. All organizations, agencies, and institutions holding federal contracts or subcontracts of $50,000 or more are further covered by the order's requirement for development of a written affirmative action plan. | All employees. | All education agencies and institutions receiving federal assistance. |
| Prohibitions | Discrimination against employees on the basis of race, color, religion, sex or national origin (e.g., salaries, hiring). | Discrimination against employees on the basis of race, color, sex or national origin (e.g., hiring upgrading, firing). | Discrimination against employees on the basis of sex (e.g., payment of wages including fringe benefits). | Discrimination against students on the basis of sex (e.g., admissions, financial aid). |

Table 3-4 – continued

| Legislation | Title VII of the Civil Rights Act of 1964 as Amended by the Equal Employment Opportunity Act of 1972 | Executive Order 11246 as Amended by 11375 | Equal Pay Act (Amendments of 1972) | Title IX of the Education Amendments of 1972 |
|---|---|---|---|---|
| Agency Administering the Action | Equal Employment Opportunity Commission | Office of Civil Rights, Department of Health, Education and Welfare | Wage and Hour Division, Department of Labor | Office for Civil Rights, Department of Health, Education Welfare |

Adapted from: Resource Center on Sex Roles in Education under order NIE-P-76-0240 with the Multicultural/Silingual Division of the Education Equity Group, National Institute of Education. "Race and Sex Discrimination in Educational Institutions," National Institute of Education, Department of Health, Education and Welfare, 1977.

In wage earning vocational programs, females comprised 85 percent of the health programs, 76 percent of the office programs, and 86 percent of occupational home economics. However, males were a majority in eight agricultural programs, fourteen distributive education programs, twenty-two technical programs, and forty trade and industrial programs. Thus, in 1972, boys had three times as many options as girls in vocational education.[29]

Furthermore, according to the 1970 Bureau of Census tabulations, 50 percent of employed women were concentrated in twenty-one occupations while 50 percent of employed males were spread throughout sixty-five of the occupations listed in 1969.[30]

Judging from these findings, Steele concluded that the educational system was not preparing female students realistically for the lives they were likely to lead, noting that while adult women are increasingly seeking paid employment, adolescent girls are still choosing courses which either do not prepare them for paid employment or prepare them to work only at low status, low paying jobs.[31]

A more recent study notes that since the enactment of the Education Amendments of 1976, some states and local schools are operating programs to address the sex fairness problems in vocational education. Highlighted programs are summarized below.[32]

o Program Operator: Texas Department of Public Instruction

Program Activity: "Project EVE" is designed to inform young women regarding the full range of job opportunities available and to recruit them for nontraditional programs. A program in nine Houston high schools introduced girls to nontraditional jobs through a special career day. This included tours of their own school's vocational training facilities; a slide show depicting the history of women at work and showing women in nontraditional jobs; and a mini-course on how to plan for the future.

Changes Noted: In 1975, thirty-nine girls were enrolled in nontraditional courses in all nine high schools. In 1976, three times more girls were enrolled.

- Program Operator: North Carolina

  Program Activity: The New Pioneers Project to Eliminate Sex Biasing in Occupational Education is trying to change attitudes among state vocational education staffers, guidance counselors, and students. Started as a pilot offered at ten schools in 1974, the project emphasizes the need for both sexes to plan for a lifetime when they choose careers.

  Changes Noted: One year after the pilot began, female enrollments increased six fold in brick laying, four fold in farm production, three fold in carpentry, while male enrollments doubled in food, nutrition, housing, and home furnishing.

- Program Operator: Eli Whitney High School, Brooklyn, New York

  Program Activity: Since 1973, all ninth graders must spend a month on each of the ten vocational training areas offered at Whitney. The theory behind the program is: when the students reach the tenth grade, they will be better prepared to choose a career on the basis of interest and aptitude, rather than according to sex stereotyping.

  Changes Noted: In 1977, about twelve students will graduate in nontraditional areas. Also, student behavior and personal appearance has changed.

Other local programs include:

- Gulf Coast Junior College--training women as apprentice pipefitters, boilermakers and sheet metal workers.
- Southwest Kansas Area Vocational Technical Education School--training women to drive trucks.
- District of Columbia public school system and the Chesapeake and Potomac Telephone Company--joint training program for women as phone installers and cable splicers, and males as operators.

According to Lehmann, "These efforts are showing up in national enrollment figures. Young women in trade and industrial courses rose from 11.7 percent in 1972 to 12.6 percent in 1975, while the number of boys in home economics,

office, and health training courses also increased slightly. Meanwhile, the percentage of girls in all types of home economics courses--those for future housewives as well as those that are job-oriented--declined."[33]

## NOTES TO SECTION 3

16. J. J. Zettel and J. Ballard, "A Need for Increased Federal Effort for the Gifted and Talented," Exceptional Children (January 1978), pp. 261-7.

17. Garth Mangum, "Vocational Education for the Disadvantaged: Lessons from Government Funded Programs," p. 3.

18. The National Center for Research in Vocational Education, The Status of Vocational Education: School Year 1975-76, Draft Copy (Columbus: The Ohio State University, 1978).

19. Marc E. Hull, Vocational Education for the Handicapped: A Review (Columbus: The Ohio State University, 1977), p. 119.

20. Ibid.

21. Ibid.

22. Alexander I. Law, Evaluating Bilingual Programs (Princeton: ERIC Clearinghouse on Tests, Measurement and Evaluation, 1977), TM Report 61.

23. Ibid.

24. Arthur M. Lee, Learning a Living Across the Nation, Project Baseline Fifth National Report (Flagstaff: Northern Arizona University, 1976).

25. Dale W. Berry, et al., Assessment of the Status of Bilingual Vocational Training for Adults: Final Report, Phase I, Vol. I (Kirschner Associates, 1976).

26. John C. Nolina, Statement before the Subcommittee on Elementary, Secondary, and Vocational Education, Committee on Education and Labor. U.S. House of Representatives, June 7, 1977.

27. Marilyn Steele, Women in Vocational Education, Project Baseline Supplemental Report (Flagstaff: Northern Arizona University, 1974).

28. Ibid.

29. Ibid.

30. Ibid.

31. Ibid.

32. Phyllis Lehmann, "Cutting Sex Bias out of Vocational Education," Worklife, II (February 1977), pp. 4-7.

33. Ibid.

# SECTION 4

# ISSUES AND STRATEGIES FOR FOLLOW-UP OF SPECIAL POPULATIONS

## SECTION 4

## ISSUES AND STRATEGIES FOR FOLLOW-UP OF SPECIAL POPULATIONS

This section focuses upon issues and strategies that are related to conducting follow-up studies of special populations in vocational education. Issues and strategies associated with serving the handicapped and disadvantaged populations are highlighted. However, it is felt that the issues and strategies of follow-up will be, to a large extent, common across most special populations due to commonality in definition. Essentially, special populations are identified as such because they require special support services to succeed in regular vocational programs. Thus, the need to systematically and effectively evaluate vocational instruction and special services such as counseling, program modifications, and tutorial assistance will be largely similar regardless of the special populations being described.

The section has four focal points. The first is a discussion of legislative mandates pertaining to evaluation of programs for special populations. The second describes a series of issues associated with follow-up studies of special groups. The third highlights the major support services and program modifications to be evaluated. The fourth offers a series of recommended strategies for conducting mail, telephone, interview, and case study follow-up assessments.

### Legislative Mandates

The Education Amendments of 1976 (P.L. 94-482), specifically Title II - Vocational Education, have instituted major changes in the design, delivery, and evaluation of vocational education throughout the nation. Two major themes of particular note in the legislation include: (1) increased attention to meeting the occupational development needs of special populations, including the handicapped, disadvantaged, minorities, women, and persons of limited English-speaking ability, and (2) increased emphasis on the planning and evaluation of local and statewide vocational

education programs. This section addresses several issues, problems, and strategies found in the commonality of these two themes. Section 112(b) of PL 94-482 describes the obligation of the State Board of Vocational Education to conduct evaluations of each supported vocational program at least once during a five-year period. Section 104.400 of the Federal Register (October 3, 1977) describes the rules and regulations implementing this section. The broad evaluation areas include: (1) planning and operational processes; (2) results of student achievement; (3) results of student employment success; (4) the results of additional services, as measured by the suggested criteria above that the state provides under the act for special populations. Section 104.404 of the Federal Register (October 3, 1977) reads that special data on completers and leavers include:

104.404 Special data on completers and leavers.

(a) The State shall evaluate, using wherever possible statistically valid sampling techniques, the effectiveness of each program of vocational education which purports to teach entry-level job skills.

(b) The State shall evaluate each of these programs in order to ascertain the extent to which both those students who complete a program and those students who leave before completing a program:

(1) Find employment in occupations related to their training; and

(2) Are considered by their employers to be well-trained and prepared for employment.

(Sec. 112(b) (1) (B); 20 USC 2312)

Mandates for evaluation of programs and services for the handicapped population can also be found in PL 94-142, Section 1413 (a) (11). Each state's annual program plan for education of the handicapped " . . . must include procedures for evaluating at least annually the effectiveness of programs in meeting the educational needs of handicapped children, including evaluation of individualized education programs."[34] A similar mandate for evaluation is contained in the federal legislation implementing compensatory education; however, the disadvantaged students served are typically preschool and elementary age and thus do not participate in vocational programs in most states.

## Need for Evaluative Data

The need for valid and reliable evaluation data is imperative. Since the late 1960's the growth in educational programs and appropriation for special population groups have been steadily increasing. As a result of the civil rights movement, many groups that have been previously excluded now have access to vocational education. Within the next few years, the federal and state legislatures, advocacy organizations, and other policy making groups will be demanding some evidence that the special populations are being effectively served. The questions for vocational education, of course, will focus upon the extent to which these individuals have been successful in obtaining employment.

In addition to requiring justification for continued appropriations, data will also be needed to examine possible changes in rules and regulations that guide the implementation of programs. Several new major provisions were introduced as a result of the 1976 Amendments (e.g., excess cost funding and matching by purpose) which could prove to be disincentives instead of incentives for serving special groups in vocational programs. Changes in state guidelines and regulations may also be required to supplement the federal regulations. Informed decisions regarding the revision of regulations can only be made if good impact and follow-up data are available.

Follow-up data are critical to the long-range improvement and expansion of special needs services and programs. A critical analysis of the effectiveness of support services, such as remedial instruction, special materials, and vocational counseling can be made, in light of student achievement and labor market success. The results of the analysis can assist local administrators in revising special programs and support services from a comprehensive information base.

## Critical Problems

The critical problems of follow-up assessment can be classified in three areas: definitional problems, problems in determining user information needs, and measurement problems.

Definitional problems. As noted earlier, special populations are designated as such because they require modified programs and/or support services to succeed in regular vocational education programs. However, there is little commonality in the legislative and regulatory definition of these groups. The following is a series of problems that must be considered by planners of follow-up studies:

1. Individual versus group identification. The legislation requires that the handicapped and disadvantaged be identified on an individual basis. The support services to be prescribed must be focused on enabling each student to succeed in a vocational program. However, women and persons of limited English-speaking ability (LESA) are identified and programmed for on a group basis. Obviously, follow-up data must target upon the labor market success of both individuals and groups.

2. Federal versus state definitions. Frequently the state education agencies' definitions for the terms "handicapped" and "disadvantaged" differ from the federal definitions. For instance, some states use the term "educationally handicapped" to refer to students who might be defined as academically disadvantaged under the 1976 Vocational Education Amendments. Also, there is variance in the range of disabilities included in state legislation. For example, the gifted and talented presently are not included within the federal definition of handicapped, but 21 states have legislation which includes this group within their definition of handicapped or exceptional.[35] To the maximum extent feasible, persons planning follow-up assessments must clearly identify the appropriate classifications to insure that the follow-up data are compatible with state and federal information systems.

3. Causal and functional inconsistency. Schneck, Lerwick, and Copa note that both causal and functional definitions are necessary when describing the handicapped and disadvantaged populations.[36] Causal classifications refer to the source of the disability (e.g., brain injury), while functional definitions define the operational effects of the disability (e.g., reading below grade level). Causal definitions are needed for accountability purposes, while functional definitions are needed to plan special services.

The classification of "economically disadvantaged" represents a causal definition without a related functional component. Because students come from a family with an annual income below the poverty level, it must be "assumed" that they require special services. With this target group the causal-functional relationship is often inconsistent and unclear. Planners of follow-up studies may find it difficult to identify (and thus evaluate) the special services provided to economically disadvantaged youth. Similar causal-functional inconsistency problems become apparent when noneducation identification criteria, such as the status of the individual's employability (e.g., unemployed or underemployed) sex, race, and income level are used.

Problems related to user information needs. The uses and users of follow-up assessment information are diverse. Determining who needs what kind of information is a major task for individuals responsible for planning and operating follow-up systems.

1. Purposes of information. As noted earlier, follow-up information describing the employment status of special populations is critical to policy revisions and refinements, continued or expanded appropriations at the federal and state level, planning future programs and services, and career planning of incoming students. The information can be used for a multitude of purposes, including demonstration of compliance, shaping policies and legislation, program evaluation and management, and guidance services. With multiple purposes existing, it is difficult to give priority to the specific information and data to be collected, sampling procedures, information sources to be contacted, and procedures for preparation of reports. Thus, it is incumbent upon the planners of follow-up assessment studies to judiciously manage the overall blending of the diverse purposes of a given follow-up study.

2. Types of information. Along with diversity in purpose there also exists diversity in the type of information to be collected. The principal purpose of the follow-up will shape the type of information collected. The Federal Register regulations cited earlier emphasize the need to collect follow-up information for evaluating the effects of special

services upon planning and operational processes, student achievement, and student employment success. Historically, data describing the vocational student's labor market success have been considered the most important in policy and legislative decisions. However, with an increase in the number of special populations students, it would appear that equal emphasis will be placed on the effectiveness of planning and operational processes, learner achievement, and labor market success. The need for specific types of information will vary across communities and programs. Planners of follow-up studies should attempt to collect information consistent with the overall purposes of the study.

3. Utilization of existing data collection and evaluation systems. Several national and state level data systems have been implemented to improve vocational education planning as a result of the 1976 Amendments. The National Center for Education Statistics is responsible for developing and operating a national data system which compiles data on enrollments, completers and leavers, expenditures, staff, and facilities.[37] The National and State Occupational Information Coordinating Committees were established in the same Act to coordinate the collection and dissemination of occupational information across several agencies. The National and State Advisory Councils on Vocational Education are charged with evaluating vocational education efforts annually. In addition, a number of states have well-established management information systems which collect critical data as required by state legislation and related information needs. The reader is referred to section six of this handbook for a more detailed discussion on the uses of follow-up data and information. Following an in-depth study of the service need requirements of handicapped and disadvantaged students in vocational-technical education programs in Minnesota, Schneck, Lerwin and Copa noted:

> There are a large number of agencies involved in providing services to handicapped and/or disadvantaged persons in vocational education. There is a strong need for coordination of definitions and management information within and between these agencies. Consistent program and service terminology is needed. The management information system needs strict compliance in data input and monitoring of analysis and output.

To the maximum extent appropriate, planners of follow-up assessments should be familiar with and utilize data collected by existing systems. However, caution should be exercised to insure that the data obtained from existing systems are valid, reliable, and comprehensive.

4. Determining appropriate information sources. Typically, follow-up studies use the student who has completed or left the program as the principal information source. The new provisions for state board evaluations incorporate the employer's assessment of the performance of vocational education students as compared with the performance of persons who have not been enrolled in vocational education programs.[38]

With the increased participation of parents and advocates in the planning of educational programs for their children, such as that reflected in the Education for All Handicapped Children Act of 1975 (PL 94-142), these individuals have to also be considered as a key information source for follow-up assessments. In addition, representatives of various supporting agencies, such as vocational rehabilitation and CETA, can provide useful information concerning the status of supplemental, transitional, and continuing support services. Within the resources available, efforts should be made to obtain follow-up information that is considered essential and useful from a variety of sources.[39]

Measurement problems. There are several problems that are associated with obtaining and interpreting information that describes student achievement or labor market success.

1. Confidentiality of records. Recent federal legislation and regulations have limited the accessibility of personally-identifiable information contained in school records. Strict policies have been adopted concerning the storage, disclosure to third parties, retention, and destruction of student information describing a student's in-school

performance and the support services provided. Persons conducting follow-up assessments will have to: (1) petition for access to records, and (2) provide assurance that the information will not be used in a manner that permits personal identification of student(s) involved.

2. Interpreting non-discriminatory assessment provisions. PL 94-142 requires that testing and evaluation materials and procedures that are used for purposes of evaluating handicapped students be selected and administered so as not to be racially or culturally discriminatory. Evaluation procedures must be administered in the student's native tongue or other mode of communication. Tests must be designed or selected and administered so as to ensure that when they are administered to a student with impaired sensory, manual, or speaking skills, the test results reflect accurately the individual's aptitude or achievement level, rather than the impaired sensory, manual, or speaking skills.

   In some instances this will necessitate the use of additional persons or resources for collecting follow-up information. For example, interpreters may have to be hired to support the interviewing of deaf students. Follow-up instruments will have to be prepared in multiple native languages in some states. Special or modified versions of standardized tests, such as the Nonverbal Aptitude Test Battery, should be utilized whenever feasible. Other modifications to instrumentation and administration procedures are described later.

3. Lack of good measures of severity. It was noted earlier that there is considerable diversity in defining existing educational handicaps and disadvantages. In addition to knowing the type of handicap or disadvantage, it is important to assess the severity of the disability. Numerous cost studies have shown that the costs are considerably higher for educating students who are severely mentally or physically handicapped. To accurately weigh the accrued benefits of vocational programs, the severity of the student's educational problems must be known. The severity of mental problems is obtainable from test scores. However, there are few scales for measuring and classifying the severity of individual physical, behavioral, or cultural problems.

4. Identifying entering performance levels. In order to systematically assess the effectiveness of special programs and support services, it is critical to know the student's level of performance upon program entry. Other than for handicapped students, limited diagnostic data are compiled for identification, screening, and referral of special needs groups. Whenever possible, it is incumbent upon planners of follow-up studies to obtain and use information that describes the student prior to the program.

## Program/Support Service Components to be Evaluated

In addition to the labor market participation of former students, there are numerous service and program components that can be focused upon in follow-up assessments. Key questions concerning the availability, extent of participation, perceived effectiveness, and recommendations for improvement can be posed for each of the following components:[40]

Instructional Services

- Vocational education instructors
- Basic education instructors
- Readers/interpreters
- Remedial teachers/therapists
- Instructional aides/tutors
- Instructional materials
- Testing and diagnosis
- Cooperative work experience instruction
- In-school occupational instruction
- Prevocational instruction

Supportive Services

- Guidance and counseling
- Social work and family counseling
- Work evaluation services
- Transportation
- Field trips and community resource utilization
- Job placement services
- Follow-up services

Facilities and Equipment

Occupational lab facilities
Occupational program equipment

Recruitment and Enrollment

Identification of students
Recruitment materials and information
Advertising
Referral procedures

## Strategies and Methods of Follow-up

Administration. Administration of follow-up studies for handicapped and disadvantaged students is not significantly different procedurally than for other groups. Whatever method is chosen for data collection, the administration of the study contains the same elements. The major difference is in deciding whether to use one of the survey procedures or alternative methods.

When general populations are studied, the mail, telephone, or interview survey type study is frequently utilized. The survey is efficient and least expensive to perform when the population does not require special considerations regarding data collection procedures or instrumentation. General population studies do not require staff trained in other than survey technique, but studies focusing on special populations do. This becomes an administrative problem, both in terms of cost and selection of personnel.

The key administrative item is selection of personnel who are knowledgeable about special populations. The needs of this collective group, their sensitivity to relationships with others, and problems peculiar to their needs must be taken into account in the total process of planning follow-up studies. General rules for conducting a follow-up study apply, but additional elements recognizing the rules' uniquenesses, must be stressed. Therefore, individuals responsible for follow-up should be cognizant from experience of the distinctions in working with these groups of people.

Procedure and instruction. Regarding instrumentation, there are problems peculiar to each type of special need and each survey procedure. One problem of a general nature, "the intention to please," is frequently the response of the special student. Its root is in the educational system. The experienced special student may have learned the importance of smiling and nodding "yes" when the teacher asks "Do you understand this?" or shaking her/his head "no" when the teacher asks "Are there any more questions?"[41] Thus, if the instrument is threatening in any way, the response to subjective questions could be a measured response with intent to please. Care should be taken to ensure that the design of the instrument does not generate subjective responses and contaminate the data.

Each type of handicap demands consideration in instrumentation. For example, a blind or partially sighted individual would require a survey in braille or one with large print and response spaces. If the identification of the handicap does not include the degree of sightedness, a survey form could not be designed to relate to the needs of the individual surveyed. Even if the degree of sight is known there exists the problem of someone assisting the subject in completing the survey and that person's bias seeping into the response. A telephone survey or personal interview might be appropriate. The instrument in that situation must be adapted for oral translation by an interviewer with questions designed for shortest possible answer. The problem lies in the communication between interviewer and subject and the amount of interpretation of response that occurs. Also, the speaking voice of the interviewer must be considered in the selection of personnel.

Other handicaps which affect the subject's ambulatory abilities need also be taken into account. If the survey procedure is to be used, knowledge about the degree of handicap will determine the choice of mail, telephone, or personal interview survey. A combination of the three kinds may be required to meet the needs of people with widely divergent degrees of handicap.

In situations of hearing loss, the telephone survey is the least desirable. Even personal interviews can be difficult, depending upon the severity of the hearing disability. In most cases, this handicap calls for a mail survey, the process which least challenges the abilities of the subjects. When mail surveys are used, the reading level and content must be commensurate with the language ability of the respondents.

The readability of the instrument must be matched to the person reading it. Not only must it be clear, concise and objective, but it must be able to be comprehended by those who respond to it. At the time of validation, it would be necessary to determine the level of reading ability required to understand the information sought. A question which has been qualified to assure the highest degree of objectivity of clarity of intent may, via the qualification, have been increased substantially in regards to its readability. Procedures for determining the readability of an instrument are defined in Section 5 of the handbook. The reader is encouraged to review those techniques and procedures.

Figures 4-1 through 4-7 on the following pages, summarize the special considerations to be made in selecting or developing and using evaluation instruments with special needs populations.

In a personal interview, the neutrality of setting becomes important. It is difficult to interview a person when family or friends are present. In addition to interruptions, the results can be contaminated by the subject's self-image in relation to family and friends and the subject's perception of how her/his responses will be interpreted.

An office interview, if private and uninterrupted, is generally thought to be the most neutral. However, if that office is located in a complex with which the subject is familiar (the director's office or counseling office in the subject's former school) results can be contaminated by the attitude of the subject about what that setting represents. Whenever possible, the office interview should be conducted in a neutral office, one not associated with administration or teachers with whom the subject is familiar.

The interviewer, in a personal interview, may create bias by appearance, attitude, and presence. Overly casual or unduly formal appearance or manner may cause the subject to relate to the interview in different ways. There are no prescriptions for avoidance of this possible bias. Caution must be exercised so that rapport with the subject is not unduly influenced by some nuance that is irrelevant to the purpose of the interview.

**Figure 4-1**

**Special Considerations for Follow-up for the Mildly Mentally Handicapped**

---

Use vocabulary and language that is extremely simple and concise.

Make the sentences as short as possible.

Verify that the information to be read is at or below the learner's reading level in terms of difficulty.

Use nonverbal response scales whenever possible.

Permit oral presentation of questions to provide simplification and clarification.

Permit interviewing to take place in short sessions over several days.

Provide simple directions and several examples for responding.

Use only concrete, meaningful items.

Repeat directions or other essential information until overlearning occurs.

Use some modes for responding other than writing whenever possible.

---

**Figure 4-2**

**Special Considerations for Follow-up of the Blind or Partially Sighted**

---

Use instruments prepared in braille.

Use instruments with large print.

Use auditory modes instead of visual modes of communication, such as questions on cassette tape.

Use special or supplementary lighting.

Design instrument using tactile discrimination.

Arrange for students to respond in braille or use a cassette tape recorder.

---

**Figure 4-3**

**Special Considerations for Follow-up of the Deaf or Hard of Hearing**

---

Use a total communication approach that includes lip reading, signing, and finger spelling.

Provide favorable seating for partially hearing students.

Employ necessary sound amplification devices.

Use special devices to improve acoustics.

Have the instrument reviewed for interpretation by manual communication.

---

**Figure 4-4**

**Special Considerations for Follow-up of the Learning Disabled**

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Use modes for responding that do not involve extensive writing or speaking.

Have instruments and procedures reviewed by a learning disabilities consultant prior to use.

Watch the student carefully for cues that difficulty is being encountered.

---

**Figure 4-5**

**Special Considerations for Follow-up of the Physically Handicapped**

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Provide large response boxes for individuals who exhibit poor fine motor coordination.

Provide adaptive furniture or equipment where situations or environment warrants it.

---

**Figure 4-6**

**Special Considerations for Follow-up of the Emotionally Disturbed**

---

Prior to interviews take steps to insure that the follow-up situation is nonthreatening to the extent possible.

Watch the individual in a follow-up interview to spot potentially disruptive situations.

---

**Figure 4-7**

**Special Considerations for Follow-up**

**of the Limited or Non-English Speaking**

---

Have follow-up instruments translated to the native language.

Have a bilingual person to administer the instrument.

Consider very carefully the cultural fairness of your follow-up instruments or interview schedule. To what extent do the procedures or instruments point out differences among cultural groups that are based on language, reading speed, or culturally loaded content?

---

The case study: a feasible alternative. Two factors suggest movement away from the survey toward the technique of the case study: (1) the difficulties inherent in the survey when applied to special populations; and (2) the subjective elements of following-up a special group.

The problems peculiar to use of a survey instrument for follow-up of handicapped and disadvantaged persons are contained in the previous discussion. They include decisions related to: (1) recognizing the degree and kind of capabilities or disabilities that result from individual handicaps or disadvantages; (2) assuring the readability of the instrument; (3) utilizing the appropriate combination of mail, interview, or telephone surveys; (4) selecting "special needs sensitive," experienced survey personnel; (5) defining individual problems associated with each kind of survey, as reflected in using them with various "special" populations. Each of these problems can be overcome, but the cumulative effect on the complexity of administering the study and potential for contamination suggests the need for an alternative.

In the 1977 "Plan for the Study of Vocational Education," the National Institute of Education indicated that case studies would be conducted on "Meeting Special Needs." These case studies will seek to "learn about the interrelationships among persons with special needs, types of and access to programs and services, and local labor market conditions and information."[42]

Case studies address the total individual, providing a profile on their uniquenesses: "People are not typical, they are individuals existing in definite environments, preserving unique abilities and characteristics . . . The case study method provides information about specific persons, existing institutions or concrete entities . . . (and) must include biographical, physiological, environmental, psychological . . . data."[43]

Social workers have long used the case study method to develop a profile sufficient for diagnosis and treatment purposes. The information obtained from case studies is precisely the information sought in the follow-up of special needs populations. Specialists in the subject's occupational specialty and disability or disadvantage examine the pertinent physical, environmental, employment and educational phenomena. By way of the case conference, an accurate scenario is developed; and educational and employment data are examined in the appropriate context. Only by this method can speculation about the subject be eliminated.

The case study method can provide for the identification of student perceptions of one's family, social setting, school and employment. Attitudes of family, acquaintances, employers, and teachers affect the attitude of the subject. Thus, in using the case study method these attitudes can be scrutinized closely. For example, an employer's attitude would be examined in the context of the subject's perception, the employer's self-analysis and other employees' observations. The composite profile yields a more accurate picture of the employer than would any single consideration.

The case study method offers a positive alternative or an adjunct, given procedural problems inherent in the follow-up surveys when applied to special populations, and the subjective elements associated with follow-up studies of special populations.

## NOTES TO SECTION 4


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37. Federal Register. Vocational Education, Vol. 42, No. 191 (October 3, 1977).

38. G. R. Schneck, L. P. Lerwick, and G. A. Copa. Assessment of the Prevalence and Service Need Requirements of Handicapped and Disadvantaged Students in Vocational-Technical Education Programs in Minnesota (Minneapolis: Minnesota Research Development Center for Vocational Education, 1978).

39. Federal Register. Education of Handicapped Children, Vol. 42, No. 163 (August 23, 1977).

40. E. R. Kay, B. N. Kemp, and F. G. Saunders. Guidelines for Identifying, Classifying, and Serving the Disadvantaged and Handicapped Under the Vocational Education Amendments of 1968 (Washington, D. C.: Department of Health, Education, and Welfare, 1973).

41. Ronald J. Lutz and Virginia L. Pearson. "Teaching Safety to the Special Needs Learner," Industrial Education, February 1978. Reprinted in Teaching Special Needs Students, eds., L. Allen Phelps and Len Albright (May 1978).

42. "A Plan for the Study of Vocational Education," transmitted to the Congress by the National Institute of Education (Washington, D. C.: Department of Health, Education and Welfare, December 30, 1977).

43. Billy L. Turney and George P. Robb. Research in Education (Hinsdale, Illinois: Doyle Press, Inc., 1971).

# SECTION 5

# PROCEDURES AND PRACTICES FOR FOLLOW-UP STUDIES

## SECTION 5

## PROCEDURES AND PRACTICES FOR FOLLOW-UP STUDIES

This section is an expansion of section 4. It provides a detailed description of those procedures and practices for conducting follow-up studies of special populations.

Although many current evaluation practices at the state and local levels include common instrumentation reporting procedures for special and non-special populations, certain considerations must be made to accommodate the physical, psychological, social and emotional differences that do exist. A number of these differences were highlighted in section 4. The acceptability of the procedures and practices further defined in this section should be considered in evaluating their potential usefulness for follow-up studies of the special populations.

The basic design considerations and practices offered in this section have been adapted and/or taken from Evaluation Handbooks: Guidelines and Practices for Conducting Follow-up Studies, Volume One.

### Considerations for Collecting Follow-up Data of Special Populations

Defining target groups is a prerequisite for planning follow-up studies of special populations. Developing a matrix of those to be included in the study should assist in determining the most appropriate type of instrument or method to be used in collecting data. Characteristics of special populations are provided in section 3 of this handbook.

The collection of pre-interview data--personal data, education, training, and experience--is also recommended to help in the actual data collecting process and to identify the most appropriate method and facilitating environment.

Top priority must be given to the special needs of the follow-up respondents. For certain visually handicapped, mentally retarded, orthopedically impaired, or limited English-speaking persons, the conventional mailed questionnaire has limited appeal. Each situation must therefore be evaluated individually in order to determine the need for an assistant and/or special devices (e.g., tape recorder, braille or large-print forms) to help the respondent complete the questionnaire.

A telephone survey may be a feasible alternative to the mailed questionnaire. Individuals with hearing impairments are sometimes able to use special telephone amplifying equipment. Again, special needs must be taken into consideration.

The face-to-face interview requires a trained interviewer who is sensitive to the special needs of the respondent. Whenever possible, it is advisable to "match" the interviewer and respondent according to race, sex, and handicap condition, etc. Detailed interviews should be planned and rehearsed in pilot or role playing experiences prior to actual meetings.

The major decisions and steps in the design and planning of a follow-up study of former vocational students defined as special populations focus on four major concerns or issues. These include:

1. Ensuring that adequate attention is given to the task of developing follow-up study objectives which take into consideration the characteristics and needs of the special populations.

2. Identifying techniques for the development of survey instruments or interview schedules to collect information from former students and employers. These include:

   a. Determining questions to be asked (i.e., what data will be collected).

   b. Determining the most appropriate format for the instrument or interview.

c. Maximizing the readability of the instrument or interpretability of the interview questions.

d. Increasing the reliability and validity of the instrument.

e. Developing sex and ethnic equitable language for the instrument and interview schedules and sensitivity to feelings and attitudes peculiar to special populations.

f. Defining the most cost-efficient and cost-effective method(s) for processing the data and information obtained through the survey instrument or case study approach.

3. Implementing procedures for ensuring the requirements from the Family Education Rights and Privacy Act (Public Law 93-380 and amended by Section 2 of Public Law 93-568).

4. Defining the population and/or representative sample.

These procedures will be described in detail on the following pages.

Developing an Outline of Activities for Conducting a Mail Survey Follow-up Study

Defining the specific tasks and personnel responsibilities in a time phased network can increase the likelihood of a successful effort. Flowcharts delineating these activities in sequence should help to minimize logistical problems. Figures 5-1, 5-2, 5-3, and 5-4, adapted from procedures defined by McKinney and Oglesby, delineate four phases in the design and planning of follow-up studies: (1) preparation, (2) data collection, (3) data analysis and report preparation, and (4) dissemination of follow-up study results.[44]

**Figure 5-1**

**Follow-up Study Phase I: Preparation**

1. Develop follow-up study objectives.

2. Identify special populations and/or sample of former students or employers to be included in follow-up study.

3. Choose best method (cost-benefit/cost-effective) for conducting follow-up study.

   a. Mail questionnaire.
   b. Personal interview.
   c. Telephone interview.

4. Design questionnaire or interview schedule in consultation with input from all people involved directly or indirectly in the educational and employment process. These include, but are not limited to groups, such as administrators, teachers, advisory committees, board(s) of education, state department of education personnel.

5. Obtain authorization for use of signatures from educational administrators who may be signing alert cards, cover letters and reminder cards/letters.

6. Obtain addresses of former students and prepare master address file.

7. Obtain necessary approvals to collect information on former students in compliance with the Family Educational Rights and Privacy Act (Public Law 93-380 and amended by Section 2 of Public Law 93-568).

8. Establish mailing dates and prepare follow-up materials for mailing or identify interview dates and develop interview schedules.

**Figure 5-2**

**Follow-up Study Phase II:**

**Data Collection Via Mail Survey**

---

1. First mailing – alert cards.

2. Second mailing – cover letters and questionnaires sent end of first week.

3. First response analysis:

   a. Begin running count of returned, and completed questionnaires.
   b. Attempt to find correct addresses for instruments returned because of incorrect address.
   c. Compile address list for third mailing of non-respondents and corrected addresses.

4. End of second week – third mailing.

   a. Reminder cards for non-respondents.
   b. Questionnaires to corrected addresses–instruments returned with "address unknown."

5. End of third week – fourth mailing.

   a. Reminder letter and second copy of questionnaire to non-respondents.
   b. Continue response analysis.

6. End of fourth week – fifth and final mailing.

   a. Send reminder card with cut-off date to non-respondents.
   b. Prepare telephone survey list of non-respondents.

7. Conduct telephone survey of non-respondents.

---

**Figure 5-3**

**Follow-up Study Phase III:**

**Data Analysis and Report Preparation**

1. Identify data analysis processing procedures—manual and/or electronic data processing.

2. Define statistical techniques for data analysis.

3. Preparation of follow-up report.

   a. Identify audiences for which report(s) are to be developed.
   b. Analysis of findings.
   c. Development of nonrespondent report.

4. Publication of report.

Figure 5-4

Follow-up Study Phase IV:

Dissemination of Results

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1. Identify groups to receive report:

   a. Administrators
   b. Teachers
   c. Advisory committees
   d. Board(s) of Education
   e. Government agencies
   f. Employers

2. Develop evaluation form to be included with distribution of report to assess usefulness, timeliness, readability, etc.

3. Develop conference or workshop package to present findings at key meetings to achieve optimum impact.

   a. Local inservice workshops.
   b. Annual statewide conference on vocational education.
   c. Public hearings or meetings.

4. Develop news media article.

---

## Developing Follow-up Study Objectives

The first important step in the design of follow-up studies is the development of objectives. Certainly the primary objective of compliance to satisfy federal and state reporting requirements must be considered. With the passage of Public Law 94-482, a declining resource base for a number of educational agencies, and a mandate to serve more individuals and provide more services, follow-up studies can and should be recognized as relevant and valuable for program planning and decision making, evaluation, and the establishment of vocational education accountability. Theoretically, accountability emanates from the overall philosophy of vocational education, and the two are extremely important reasons for developing follow-up objectives.

The word accountability is open to numerous interpretations. For some, it means providing students with marketable knowledge and skills for jobs related to field of training. Others believe accountability exists if vocational education provides knowledge and skills for improved career decision making, either for entry into the labor market or continuing education. Accountability is a term which education in general and vocational education in particular has yet to define in precise and commonly agreed upon terms.

The identification of an overall philosophy of vocational education and its corresponding goals, objectives, and outcomes is a difficult task. There seems to be little agreement among educators, especially vocational educators. However, a point of departure appears in the vocational education legislation. The Educational Amendments of 1976 and the regulations for vocational education provide a basis for an overall philosophy. Specifically, Section 104.2 of those regulations states that:

> The Declaration of Purpose is to assist States in improving the use of all resources available to the States for vocational education and manpower training by involving a wide range of agencies and individuals concerned with education and training within the State in the development of the vocational education plans.

This part also authorizes federal grants to states to assist them:

1. To extend, improve, and where necessary, maintain existing programs of vocational education.

2. To develop new programs of vocational education.

3. To develop and carry out such programs of vocational education within each state so as to overcome sex discrimination and sex stereotyping in vocational education programs (including programs of home-making and thereby furnish equal education opportunities in vocational education to persons of both sexes).

4. To provide part-time employment for youths who need the earnings from such employment to continue their vocational training on a full-time basis, so that persons of all ages in all communities of the state, those in high school, those who have completed or discontinued their formal education and are preparing to enter the labor market, but need to upgrade their skills or learn new ones, those with special educational handicaps, and those in postsecondary schools, will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests and ability to benefit from such training.[45]

A major goal contained in this declaration of purpose is to provide follow-up information that can assist in making decisions concerning the development and improvement of vocational education programs. Evolving from this major goal are four broadly defined objectives:

1. Improvement, expansion, or elimination of vocational education programs;

2. Assistance in decision making;

3. Assistance in planning; and

4. Assistance in evaluation and accountability.

From the delineation of the four broadly defined objectives, specific or "question-oriented" objectives are developed. Examples of such specific objectives which a number of follow-up studies have addressed include:

- Define the extent to which former vocational students have used their vocational training.

- Identify types of employment experiences which former vocational students have had in the labor market.

- Determine occupational and geographic mobility patterns of former vocational education students.

- Identify reasons for former vocational students leaving before completing a program of studies.

- Identify on-the-job difficulties which former students have experienced.

- Determine the adequacy of training from the perceptions of former students.

- Obtain information on the extent of participation in postsecondary or continuing education training opportunities by the former students.

- Define ways in which programs can be of additional assistance to the former students toward improving the transition from school to work.

Other exemplary objectives which can assist in defining specific questions to be used in developing a follow-up instrument include:

- Provide job placement and job competency information indicating needed curriculum modifications.

- Provide job satisfaction indices and job skill information useful in evaluating vocational education instructional methods and procedures.

- Provide descriptive information about various jobs useful in guiding students into training programs compatible with their interests and abilities.

- Provide job training information which suggests instructional staff retraining, expansion, or reassignment.

- Provide information about skill training requiring new or additional equipment and facilities.

- Provide information necessary in determining the cost-benefit of the vocational education program.

- Provide information useful in evaluating the effectiveness of the vocational guidance program and in measuring the demand for a special needs program.[46]

More specific program objectives emanate from broadly based goals and objectives. If objectives are stated in performance terms, they can be the basis for stating criterion questions and consequently, questions to be included in the follow-up questionnaires. Consider, for example, the following outline of the process in which follow-up questions are derived from the 1976 Vocational Education Federal Regulations. Specifically, the regulations provided for the federal grants to states to assist them in addressing a number of broadly defined objectives, one of which was: "To extend, improve, and where necessary, maintain existing programs of vocational education." From this broadly defined objective a program objective can be derived, criterion questions developed, and items for a follow-up questionnaire developed. The following checklist presents three broadly defined objectives to consider in planning the follow-up study.

**Checklist for Defining the Follow-up Study Objectives**

What is (are) the broad objective(s) of your follow-up study?

| | | Rank Order of Importance |
|---|---|---|
| 1. | Improvement, expansion of vocational education programs for special populations. | _____ |
| 2. | Assistance in decision making. | _____ |
| 3. | Assistance in planning. | _____ |
| 4. | Assistance in evaluation and accountability. | _____ |
| 5. | Other: _____ | _____ |

Hamilton, et al.[47] offer a systematic approach for developing follow-up questions as previously described. Figure 5-5 illustrates the sequence for developing specific follow-up questions.

**Figure 5-5**

**A Systematic Process for Developing**

**a Follow-up Questionnaire**

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Program Objective:

To provide academically disadvantaged students with an educational program which will result in their entering a career program that is satisfactory to them.

A Criterion Question:

How well do former vocational students feel their education program prepared them for an occupation?

Items for the Questionnaire:

1. Considering your occupational experiences since leaving school, how well do you feel your school prepared you for your career?

   Superior preparation _____
   Good preparation _____
   Average preparation _____
   Poor preparation _____
   No preparation _____

2. How do you feel about your current job?

   I am very satisfied _____
   I am satisfied _____
   I am dissatisfied _____
   I am very dissatisfied _____

---

## Developing Survey Instruments for Former Vocational Students and Their Employers

What relevant questions should be asked of former students and their employers? As discussed earlier, one must review the follow-up study objectives. These objectives should reflect the intent of federal legislation, the goals of the state plan, and the goals and objectives of the local education agency. From the review of those goals and objectives, categories of data or information can be identified. The most frequently used data categories include: employment data, evaluative data of training and related services (both the survey of the employer and former student are equally important), continuing education plans or experiences since leaving school, and job satisfaction. Figure 5-6 offers a worksheet that will aid in systematically relating the goals or objectives to the data or information and questions to be asked.

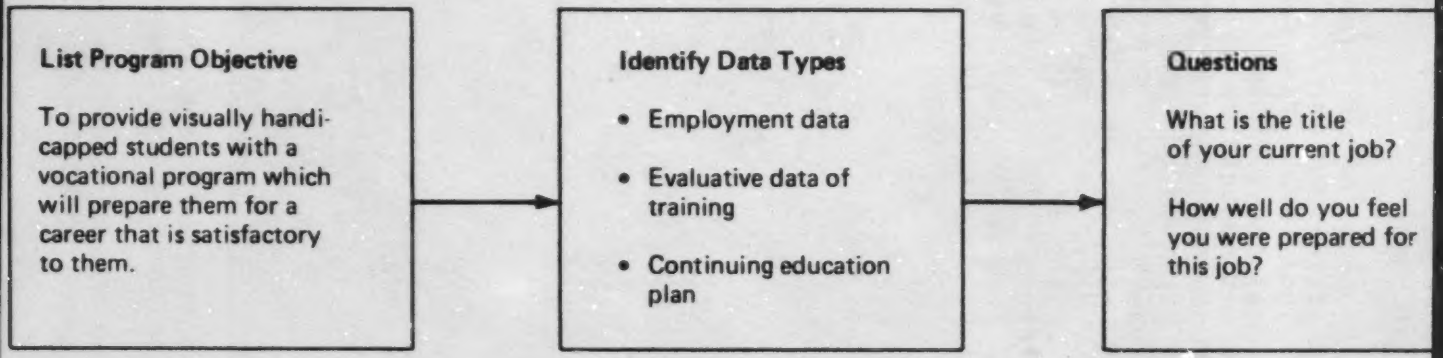
Former student survey. Eninger identifies three broad data categories used for the purpose of developing questions for gathering information on former vocational students: (1) occupational history since graduation, (2) educational history since graduation, and (3) present interests, activities and affiliations.[48]

First, Eninger suggests that occupational history can be addressed with questions focusing on ten items:

- General job placement: How soon after graduation was the graduate employed?
- Related job placement: How quickly did he/she find employment in a field related to her/his training?
- Employment security: How much of his/her post-graduation employable time has she/he spent in full-time employment?
- Job stability: How many different employers has he/she worked for during his/her employment period?
- Job satisfaction: How satisfied has she/he been with the jobs held during her/his employment period?
- Job relatedness: To what extent have the jobs he/she has held been related to his/her high school vocational training?

**Figure 5-6**

**Follow-up Data/Questionnaire Worksheet**


List Program Objective
To provide visually handicapped students with a vocational program which will prepare them for a career that is satisfactory to them.
Identify Data Types
• Employment data
• Evaluative data of training
• Continuing education plan
Questions
What is the title of your current job?
How well do you feel you were prepared for this job?

- Initial earnings: What were her/his initial earnings on the first full time job?
- Present earnings: What are his/her present earnings five years after graduation?
- Earnings progression: How have her/his earnings increased over the total employment period?
- Job mobility: How often and how far had he/she moved to improve employment status? [49]

Questions in the second category deal with the former vocational student's postsecondary education and training experiences and future plans in these areas.

The third section focuses on the vocational student's conversational interests, leisure-time activities, organizational affiliations, and attitudes toward school.[50] The latter reflect on such services as guidance, counseling, and job placement (which may or may not have been provided), and the adequacy of the vocational program and overall curriculum.

Employer survey. The same guidelines for preparing a questionnaire for follow-up of former vocational students apply for employers. The common data collection procedures for obtaining follow-up information on former students from the employer using a mail survey include:

1. Employer responds to a mail survey which includes a list of questions or a request for a summary statement about the former vocational students as employees.
2. Employer responds to a mail questionnaire concerning an individual employee who has had vocational education training.

Questions which are commonly asked of employers include:

- How many persons do you employ and how many are former vocational students?
- What jobs do former vocational students enter in your company?
- How satisfied are you with the performance of vocational program graduates?

- What are the particularly strong and/or weak areas in the former vocational student's training?

- How do you compare former vocational education students with non-vocational students on job entry skills and job or occupational mobility?

- What method or job placement service was used to help employ the former vocational students? Were you satisfied with this service?

- Do you have a working relationship with the school placement service or individual school personnel? Has this been satisfactory? What are the particularly strong points and/or weak points of the placement service effort?

It is recommended that the data from employers be analyzed by individual program areas and on an individual student basis. Also, the data should be reviewed and compared with the individual student follow-up data. Examples of employer follow-up questionnaires are found in Appendix A.

Commonly accepted rules for questionnaire construction. There are certain basic rules for constructing a follow-up questionnaire. Ebel suggests the following guidelines which can be applied for follow-up questionnaire design:

1. Express each item clearly.

2. Choose words that have precise meanings.

3. Avoid complex or awkward word arrangements.

4. Include all qualifications needed to provide a reasonable basis for response selection.

5. Avoid the inclusion of nonfunctional words in the term.

6. Avoid unessential specificity in the question or in the response.

7. Avoid the inclusion of trivial questions.

8. Make the suggested answers simple.

9. Be sure the items will be seen by the respondents as applying to a concrete situation.

10. Refrain from asking questions of opinion unless opinion is what is specifically required.

11. Avoid items that are too suggestive or too unstimulating. They should not lead a respondent to go beyond the facts, but they should induce her/him to provide the required information.

12. Phrase questions to avoid the academically or socially acceptable responses. Make it possible for the respondent to answer truthfully without embarrassment.

13. Avoid questions that may be checked with several responses when only one response is desired. In fact, such items usually are quite difficult to tabulate and analyze.

14. Whenever possible, word questions so that they can be answered simply by a check mark.

15. Ask questions in such a way that complex thinking by the respondent will be minimal. A popular technique is to reduce a complex question to a series of questions which are easier to answer.

16. Avoid the use of words which are susceptible to different interpretations; e.g., moral or immoral, good or bad, rich or poor, intelligent or ignorant, laborer or capitalist.[51]

Format considerations. Data processing is a primary consideration in developing a format suitable for a follow-up questionnaire. Whether processing data manually or by electronic data processing equipment, certain time and cost factors must be considered. Serious attention should be given to developing a format capable of being processed by some electronic data processing device.

The types of questions asked and structure of the questions can restrict coding and analysis procedures. Open-ended questions are much more difficult to process with electronic data processing equipment than are forced-choice questions. For example, a typical forced-choice question found in a follow-up questionnaire would be:

How does your present job relate to your training received at the area vocational school?

1. Highly related
2. Somewhat related
3. Unrelated

An example of an open-ended question commonly asked in a follow-up of former vocational students, and one which would create problems should the form be processed using electronic data processing equipment, follows:

Describe your specific job duties: _____
_____
_____
_____

It is extremely important that one work with a computer systems analyst or person in charge of data processing to review the questions and data needs in order to design a questionnaire which is both cost effective and efficient.

Descriptions of exemplary survey instruments are provided in a handbook currently available for use by selected state vocational education agencies and secondary and post-secondary schools, Vocational Education Measures: Instruments to Survey Former Students and Their Employees. The handbook focuses on four types of instruments:*

1. Job Satisfaction. Instruments which have items that are purported to measure employees' perceptions of their satisfaction with components of this job (e.g., pay promotions, supervision, co-workers, and work); and instruments in which the sum of the scores across components yields an overall job satisfaction measure. (Instruments which only have questions to measure overall job satisfaction were not included.)

2. Job Performance. Instruments which have items that are purported to measure employees' performance in the various dimensions/components of employment (e.g., knowledge, skills, attitudes, and work attendance) as perceived by the employer. (Instruments which only have questions to measure overall employee performance were not included.)

*The reader is encouraged to review this publication for ideas for developing questions appropriate for inclusion in a follow-up study of former vocational students. These questions can be adopted or adapted to provide follow-up data on special populations. The full citation for the document is: Kenney Gray, Marie Abram and Floyd McKinney, Vocational Education Measures: Instruments Used to Survey Former Students and Their Employers (Columbus, Ohio: The National Center for Research in Vocational Education, 1978).

3. Former Students' Perceptions of Training. Instruments which have items that are purported to measure former students' perceptions of the adequacy of components of their training program (e.g., facilities and equipment, competencies acquired, and placement services). (Instruments which only have questions on the overall adequacy of the training programs were not included.)

4. Employers' Perceptions of Training. Instruments which have items that are purported to measure the effectiveness of components of employees' preparation and training for employment (e.g., knowledge and skill areas) as perceived by an employer of persons who recently completed a job training program. (Instruments which only have questions to measure overall adequacy of preparation and training programs were not included.)

Appearance of the Questionnaire

A questionnaire must be visually pleasing and simple in content. Questions should need no clarification; that is, respondents should not have to ponder over the response being requested. Many suggest that the first series of questions are extremely important in gaining rapport with the respondent. It is important to achieve a favorable attitude on the part of the respondent toward the follow-up study. Questions which are easiest to answer should be placed near the beginning. Those requiring long-term recall or those of a personal and evaluative nature should be placed at the end. Favorable attitudes may be enhanced by developing a sequence of questions that conform as nearly as possible to the respondent's way of thinking. Additional suggestions for developing rapport with a respondent include:

- Arranging ideas in a questionnaire according to a logical sequence.

- Developing the first question to motivate the respondent to participate.

Travers suggests that early questions in a series be constructed so the accuracy of subsequent responses can be checked.[52] For example, if you are trying to collect total income information, you should ask for information about the place of employment--name, type of industry, job title, job duties, hourly or base pay, and hours worked per week--before asking for total income.

Romine suggests grouping questions which can be answered in similar fashion.[53] The reason for grouping is to reduce the need for repetition of directions, and to present a more comprehensive and unified picture of the whole purpose of the follow-up. It is highly recommended that divisions be developed within the questionnaire. Specific sections, such as employment information, continuing education experiences, job satisfaction, education or training assessment, etc., could be used.

The graphic appearance of the instrument is very important. Research has shown the response rate of a questionnaire which is mimeographed on white paper will be lower than the response rate of one which is printed on green paper.[54]

Many educational researchers agree that more returns will be received when questionnaire forms are effectively presented and easy to read and complete. Suggestions include:

- Use high quality paper.
- Use colored paper or colored ink.
- Print the form rather than mimeograph it.

While most agree that the questionnaire must be attractive, a few question the need for having the questionnaire printed, unless spacing problems are better met by printing.[55] A very basic rule to follow in designing the questionnaire is to allow adequate space for answers, particularly for open-ended responses. Failure to do so discourages respondents from answering, reduces the opportunity for developing rapport with respondents, and makes interpretation of responses difficult.

Some individuals have used personalizing techniques, such as handwritten letters or follow-up forms included with a birthday card or Christmas card, which have the effect of increasing the number of responses. However, there is some evidence to indicate that personalizing the follow-up produces only slight gains in the quantity of replies and none in the quality.[56]

General requirements in the design and printing of the questionnaire include:

- Title of the study should be displayed near the top of the first page of the questionnaire.

- Name of the sponsoring agency should be centered at the top of the first page of the questionnaire.

- Space for the respondent's name and title should be provided. It is strongly recommended that a questionnaire title be included on an employer follow-up form.

- Mailing data of the questionnaire should appear on page one.

- Name, title, and complete address of person to whom the form should be returned should be included on the first page, if possible. Otherwise, it should be entered as the last item on the form.[57]

Another suggestion in regard to the graphic design of the questionnaire is the use of pre-numbering scheme for forms. Use of numbered questionnaires was recommended for two reasons: (1) if the respondent fails to write his name on the questionnaire, an accurate record of the returned questionnaires is maintained; and (2) numbered questionnaires are useful in tabulation of information. Also, the code number can be used to identify respondent groups, such as women or minorities. Thus, this eliminates the identification of individuals if there is a need to read individual reports.[58]

Questionnaires should also include, a brief statement of the purpose of the study in an accompanying letter. This letter should be endorsed by a person whom the respondents know and respect. Examples of questionnaires and accompanying letters which meet the above requirements are found in Appendices A through E. The following checklist identifies critical factors in developing a follow-up questionnaire.

## Sex and Ethnic Stereotyping Considerations for Follow-up Studies

Vocational educators must be concerned with the need for eliminating sex and ethnic stereotyping so that all individuals can pursue training in those careers which they desire. Therefore, it is important that curriculum material, classroom discussion, written documents and correspondence, and test and measurement devices be free of such stereotyping. This section of the handbook draws upon accepted guidelines which have been designed to assist in the elimination of sex and ethnic stereotyping in the designing and planning of follow-up studies.

**Checklist for Identifying Critical Factors**

**in Developing the Follow-up Questionnaire**

Does your follow-up questionnaire include the following?

| Yes | No | |
|---|---|---|
| | | Content |
| ___ | ___ | 1. The first series of questions gain rapport with the respondent. |
| ___ | ___ | 2. Ideas are sequenced according to the logic of the respondent. |
| ___ | ___ | 3. Early questions in a series are constructed so that the accuracy of subsequent responses can be checked. |
| ___ | ___ | 4. Questions that may be answered in a similar fashion are grouped together. |
| | | Appearance |
| ___ | ___ | 5. The questionnaire is reproduced on high quality paper. |
| ___ | ___ | 6. Colored paper or colored ink is used to improve the questionnaire's visual appearance. |
| ___ | ___ | 7. The questionnaire is printed rather than mimeographed. |
| | | Format |
| ___ | ___ | 8. The title of the study is displayed near the top of the first page. |
| ___ | ___ | 9. The name of the sponsoring agency is centered at the top of the first page. |
| ___ | ___ | 10. Name, title, and complete address of person to whom the form should be returned is included on the first page. |
| ___ | ___ | 11. Space is provided for the respondent's name and title. |
| ___ | ___ | 12. Questionnaires are pre-numbered. |
| ___ | ___ | 13. The purpose of the study is included in an accompanying letter. |

Practical guidelines for reducing stereotyping. Efforts should be made to eliminate sex and ethnic stereotyping when constructing questionnaires and interview guides. Certain guidelines and practices can be helpful. A major portion of the following information has been paraphrased from a publication of the National Advisory Council on Women's Programs.[59] These guidelines are intended as a learning tool to assist you in reducing sex and ethnic stereotyping. The following statements should be considered:

- Use language that encompasses both sexes: she/he, her/his; nongender referents, such as you, they, individuals, person; restrict use of personal pronouns by substituting with articles such as a, an, the.

- Interchange the use of men and women, he and she with women and men, she and he.

- Use neutral terms in identifying occupations or describing labor market factors. Examples include: firefighter for fireman, human resources for manpower, businessperson for businessman, etc.

- In developing questionnaire items, use names that are different from a white, middle-class orientation. Names common in some ethnic or minority groups include: Mohammed, Pedro, Shoshauna, Bogdan, Seon, Yetta, etc.

- Use items or questions that represent a variety of life styles, socioeconomic levels, handicaps, etc.

- Consider language, both oral and written, which depicts males and females in nontraditional occupational roles.

Stereotypical vocational role expectations for those of certain ethnic origins and sexes have become a major concern of our society. The individual(s) responsible for follow-up studies must be sensitive to these societal concerns. By using language which is attentive to reducing sex and ethnic stereotyping, vocational educators are broadening the awareness of the world of work for all concerned.

Major considerations are identified in the checklist for defining sex and ethnic stereotyping language in the follow-up questionnaire or interview guide.

**Checklist for Defining Sex and Ethnic**

**Stereotyping Language in the Questionnaire**

| Does your follow-up instrument eliminate sex and ethnic stereotyping by following these guidelines? | | |
|---|---|---|
| Yes | No | |
| ___ | ___ | 1. Interchanging the use of men and women, he and she with women and men, she and he. |
| ___ | ___ | 2. Using neutral terms in identifying occupations or describing labor markets. |
| ___ | ___ | 3. Using names that are different from a white, middle-class orientation. |
| ___ | ___ | 4. Using items that represent a variety of life styles, socio-economic levels, handicaps, etc. |
| ___ | ___ | 5. Using language which depicts males and females in non-traditional occupational roles. |

For more detailed information, the following documents are recommended for assistance in addressing the stereotyping concerns:

- Sexism and Language. (Nilsen, et al, 1977)
- Guidelines to Insure Sex Fairness in Education Division Communications and Products. (Women on Words and Images, Inc., 1978)
- Job Title Revisions to Eliminate Sex and Age Referent Language from the Dictionary of Occupational Titles. (U. S. Department of Labor, 1975)
- Guidelines for Creating Positive Sexual and Racial Images in Educational Materials. (Roberts, 1975)
- Racism in American Education: A Model for Change. (Sedlacek, William E. and Glenwood C. Brooks, 1976)

- o Sugar and Spice is not the Answer: A Parent Handbook on the Career Implications of Sex Stereotyping (Vetter, L.; C. M. Lowry; C. Burkhardt, 1977)

- o Guidelines for Sex-Fair Vocational Education Materials. (U. S. Office of Education, Bureau of Occupational and Adult Education, 1978)

## Developing Follow-up Questions for Vocational Education Programs

A commonly used questionnaire for follow-up of former vocational students adopted by most state and local education agencies consists of general status questions. These questions have been categorized as:

1. Personal information - includes information on sex, ethnic background, age, etc.

2. Employment information - defines whether the individual is employed or unemployed, and for what period of time.

3. Job information - includes information on place of employment, job title, job duties, wage or salary.

4. Curriculum information - defines whether courses taken in school supported or assisted the individual in doing her/his job.

5. School and community services information - identifies who assisted and what assistance was provided the individual in finding employment.

6. Continuing education - answers questions, such as: Did the individual continue her/his schooling? If so, in what area? Was it related or unrelated to previous training?

Information obtained by asking questions which relate to those categories is viewed by many local educators as information which lacks the necessary detail to meet their individual program needs. Often, individual teachers have conducted their own follow-up studies of their program

graduates to obtain what they consider to be their real data needs. Recognizing that each local educator may need additional and/or different information from her/his former students, a number of statewide centralized follow-up systems have provided options whereby the local education agency and an individual program area teacher may add questions to a follow-up form to obtain needed detailed information. Some state systems have provided this option for local education agencies.

The program objectives and competency-based objectives of the individual vocational education program areas can be translated into specific questions for the follow-up form. The procedures as outlined earlier provide those basic steps. Another consideration would be to define the questions around outcome categories.

In formulating individual program questions it might be helpful to consider the individual student and program outcomes. These outcomes can be defined as immediate student outcomes, long-term student outcomes, and intended program outcomes. Definitions for these outcomes follow:*

- Immediate student outcomes: Questions about changes in students' knowledge, skills, attitudes, or behaviors resulting from an individual program area experience (e.g., define skills needed to do the job, positive attitude about work, etc.).

- Long-term student outcomes: Questions about the impact of a program area on the students' career development after leaving school (e.g., job satisfaction, mobility, etc.).

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*Adapted from: K. A. Adams and J. Walker, 1977. Improving the Accountability of Career Education Programs: Evaluation Guidelines and Checklist, Draft Copy (Columbus, Ohio: The Center for Vocational Education, The Ohio State University), p. 37.

- o Intended program outcomes: These are questions about changes the program is designed to bring about that are broader than individual student outcomes (e.g., increased community involvement, increased understanding of work ethic, awareness of stereotyping by sex and ethnic role, etc.).

A list of hypothesized vocational education outcome statements (general) are offered in Figure 5-7 to provide a basis for formulating special population outcome questions and follow-up questions.

## Improving the Readability of a Follow-up Instrument

Good defines readability as "the quality of a piece of reading matter that makes it interesting and understandable to those for whom it is written, at whatever level of educational experience."[60]

Analysis of Good's definition is necessary. It is assumed the content of a follow-up instrument fulfills the definition's criterion of "a piece of reading matter." It is also assumed in order to achieve acceptable response rates (a prerequisite to fulfilling follow-up study objectives), the instrument must be "interesting." However, Good's definition does not assume that the reader will not have the same response to an evaluation instrument that she/he would have to more casual reading, e.g., comics of weekly magazine. Specific attempts to make the follow-up instrument "interesting" are dealt with in other sections of this handbook. This section deals mainly with making the follow-up instrument "understandable to those for whom it is written, at whatever level of educational experience."

There are a variety of factors which help determine whether or not reading matter is understandable. Some of these factors--interest and intelligence, for example--are internal human factors that the designer of a follow-up instrument cannot address. Other factors--word or sentence length, for example--are important considerations for the instrument designer. In order to determine if reading matter is understandable to the reader, it is essential to judge the difficulty of the material. Once the difficulty of the instrument has been determined and compared to the educational level of the targeted audience, changes and modifications, if needed, can be made in the instrument.

**Figure 5-7**

**Hypothesized Vocational Education Outcome Statements**

High school seniors enrolled in vocational programs are more satisfied with their school experience than are comparable students taking academic/general courses.

Employers rate vocational students more satisfactory as employees than comparable academic/general students after six months on the job.

Within six months of program completion, students obtained jobs related to their occupational training.

High school dropout rates are lower for vocational students than for comparable students enrolled in academic/general curricula.

Two years after program completion, vocational students were more satisfied with their jobs than were graduates of academic/general programs holding similar jobs.

Parents of high school seniors enrolled in vocational programs are more satisfied with the curriculum than are parents of comparable students enrolled in academic/general programs.

Within six months of program completion, students obtained satisfactory jobs, though not necessarily in the area of their occupational training.

Upon completion of a vocational program, students were certified as occupationally proficient and ready for entry-level employment.

Private sector employers rate high school vocational programs in their communities higher than academic/general programs.

One year after program completion, vocational students were earning higher hourly wages than comparable academic/general students holding similar jobs.

There are two general methods of judging the difficulty of written materials: informal and formal. The informal method is easier but yields subjective, less reliable data. The formal method utilizes tested readability formulae to assess written materials and obtain the approximate grade level score for the materials. Each of these two methods will be discussed in the following subsections. One point worth remembering is that all follow-up instrument designers should conduct both informal and formal procedures also. The additional expense of doing both is minimal, with the major trade-off being increased development time.

Informal technique (pilot test). The informal technique for judging the difficulty of a follow-up instrument is to conduct a pilot test. A group of students representative of the target audience can be located or "recruited" to complete the first draft of an instrument. Sons, daughters, nephews, nieces, or neighbors who are or were vocational students may be easy to recruit for such a pilot test. However, the instrument designer needs to be cognizant of the representativeness of members of the group. For example, if the target audience includes early leavers and dropouts from a vocational program, it is imperative to locate such students to help pilot test the draft instrument.

Two common procedures are used to pilot test the first draft of a vocational follow-up instrument. The first and easier is to distribute the instrument to members of the pilot test group with instructions to make notes, comments, and remarks on any content, clarity, or reading problems they may encounter while completing the instrument at their leisure. The second and more difficult procedure is to interview members of the pilot test group after they have completed the instrument. A designated individual should keep notes during the interview process to record words, sections, questions, and other items that should be revised in the follow-up instrument.

By utilizing the first procedure, the designer minimizes possible peer pressures on items of concern and probably obtains divergent points of view. Utilizing the second tactic, however, allows for discussion of disputed points or items and may lead to an improvement at that time. A third--combination--tactic may be employed. Here the designer may hand carry or mail the draft instrument and obtain the responses with a follow-up telephone call. This will save some time. Whichever procedure is used, respondents should be asked to record the exact amount of time required to complete the instrument: these data are needed by the follow-up instrument developer.

There are several important reasons for subjecting all follow-up instruments to the informal (pilot test) technique for determining the difficulty of written material. One reason is that the pilot test of a draft instrument yields crucial respondent data that help identify areas that the follow-up instrument designer should improve. The pilot test data reveal: (1) length of time required to complete the instrument, (2) reactions to the response mode(s), (3) clarity of the directions, (4) possible misinterpretations of words with multiple meanings, and (5) jargon or slang terms that created problems for the respondents.

Another reason for pilot testing all draft versions of follow-up instruments is to judge the difficulty of written materials that readability formulae do not consider. Some subtle factors not considered by readability formulae include the complexity of the concepts, the level of abstraction, the writer's style, and the grammar and syntax of the passage. Other less subtle factors not considered by readability formulae include the kind of paper, the color of the paper, the type of print, the size of the print, and even the color of the ink used in printing.

Formal technique (readability formula). Use of a readability formula yields an approximate grade level score for the written materials analyzed. The important advantage of using readability formulae is that they have been developed through research and thus yield more reliable data than informal pilot test techniques.

Most current readability formulae consider two characteristics of written materials. First, they assess the difficulty of words printed in the sections of the written materials under study. This is important because the more unusual or long words the section contains, the more difficult that section is likely to be. Second, readability formulae determine sentence length in the section under scrutiny. This characteristic is important because the longer and more complex the sentences in a section are, the more difficult the selection is likely to be. Readability formulae manipulate various aspects of word difficulty and sentence length characteristics to arrive at their approximate grade level scores.

There are four popular readability formulae applicable to follow-up instrument use. The Fry readability formula uses the criteria of syllables per 100 words and sentences per 100 words in determining its grade level score.[61] The Flesch readability formula utilizes the criteria of words per sentence and syllables per 100 words.[62] The Dale-Chall

formula employs average sentence length and the percentage of unfamiliar words as its critical criteria.[63] The SMOG formula uses word length and number of polysyllabic words as its criteria.[64] All formulae are accurate within one grade level for their scores. Each of these formulae is explained in detail in references listed in this section.

Readability formulae typically instruct the user to select one or more 100-word passages in which to derive necessary components. For use with a follow-up instrument, these 100-word passages will probably need to be secured by grouping and clustering the instrument's sequential questions and responses. However, the approximate grade level designation obtained for any one particular 100-word passage may not be representative of the entire follow-up instrument. Thus, the designer should take a number of 100-word selections throughout the instrument in order to obtain the reading difficulty of the whole instrument.

A hypothetical application of the Fry readability formula to a vocational follow-up instrument is presented below. The user is instructed to pick a minimum of three 100-word selections from the written material and count the number of sentences per 100 words and the number of syllables per 100 words. Suppose the results of this step were:

| Passage | No. of Sentences Per 100 Words | No. of Syllables Per 100 Words |
|---|---|---|
| 1 | 8.5 | 188 |
| 2 | 6.6 | 155 |
| 3 | 4.8 | 149 |
| | 19.9 | 492 |

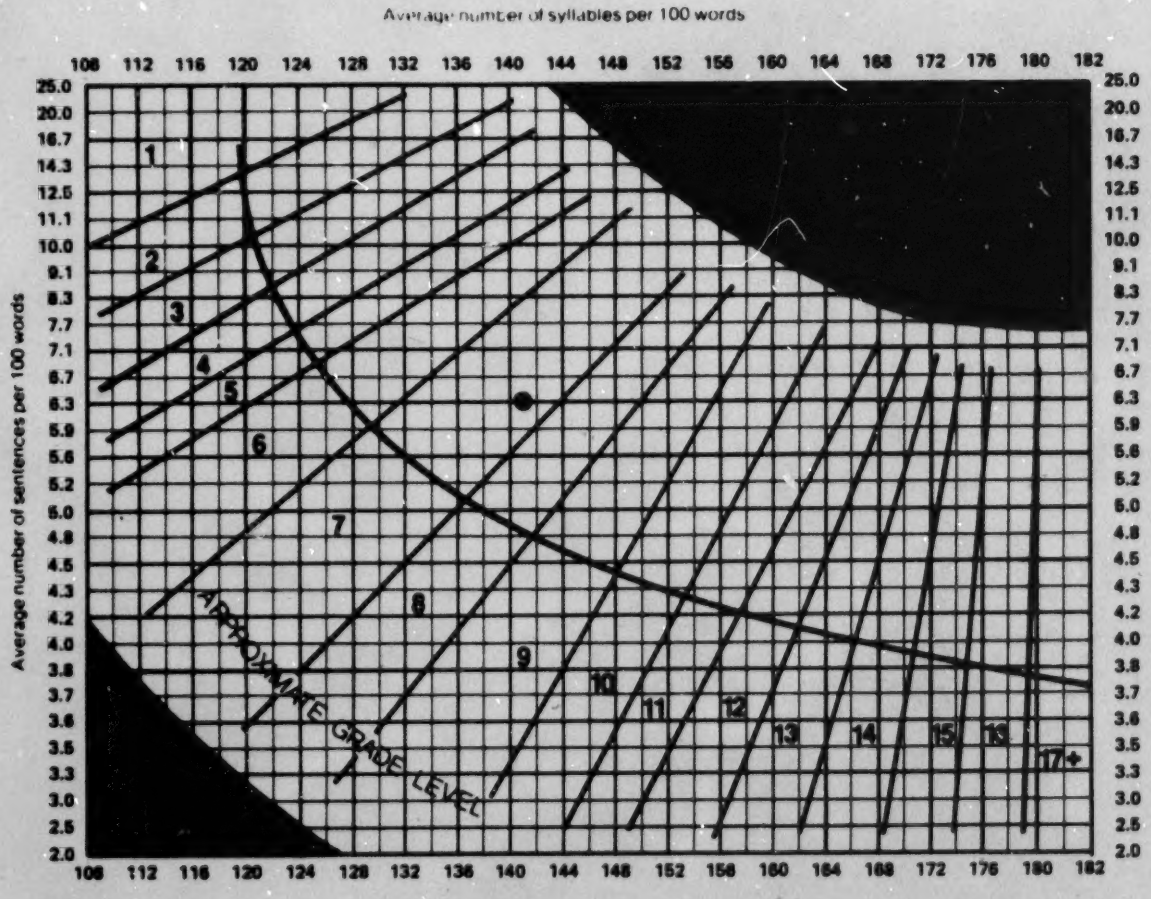
The next step is to compute the average for each column:

$\frac{19.9}{3} = 6.6$ $\frac{492}{3} = 164$

The last step is to plot these figures on the graph developed by Fry and observe the result (See Figures 5-8 and 5-9. In this case, the result is 11, meaning that the approximate grade level for the three selections analyzed is the eleventh grade. This instrument would be suitable for most graduates and leavers of two-year secondary vocational programs (assuming they were reading at grade level).

## Figure 5-8

## Graph for Estimating Readability




DIRECTIONS Randomly select 3 one hundred word passages from a book or an article. Plot average number of syllables and average number of sentences per 100 words on graph to determine the grade level of the material. Choose more passages per book if great variability is observed and conclude that the book has uneven readability. Few books will fall in gray area but when they do grade level scores are invalid.

Count proper nouns, numerals and initializations as words. Count a syllable for each symbol. For example, "1945" is 1 word and 4 syllables and "IRA" is 1 word and 3 syllables.

| EXAMPLE | SYLLABLES | SENTENCES |
|---|---|---|
| 1st Hundred Words | 124 | 6 6 |
| 2nd Hundred Words | 141 | 5 5 |
| 3rd Hundred Words | 158 | 6 8 |
| AVERAGE | 141 | 6 3 |

READABILITY 7th GRADE (see dot plotted on graph)

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For further information and validity data see the Journal of Reading December 1977.

Source: Edward Fry, Rutgers University Reading Center, New Brunswick, New Jersey 08904

**Figure 5-9**

**Expanded Directions for Working Readability Graph***

1. Randomly select three sample passages and count out exactly 100 words beginning with the first word of a sentence. Do count proper nouns, initializations, and numerals.

2. Count the number of sentences in the 100 words, estimating length of the fraction of the last sentence to the nearest 1/10th.

3. Count the total number of syllables in the 100-word passage. If you don't have a hand counter available, simply put a mark above every syllable over one in each word. When you get to the end of the passage, count the number of marks and add 100. Small calculators can also be used as counters by pushing numeral "1," then push the "+" sign for each word or syllable you count.

4. Graph *average* sentence length and *average* number of syllables; plot dot where the two lines intersect. Area where dot is plotted will give you the approximate grade level.

5. If a great deal of variability is found in syllable or sentence count, put more samples into the average.

6. A word is defined as a group of symbols with a space on either side; thus, "Joe," "IRA," "1945," and "&" are each one word.

7. A syllable is defined as a phonetic unit. Generally, there are as many syllables as vowel sounds. For example, "stopped" is one syllable and "wanted" is two syllables. When counting syllables for numerals and initializations, count one syllable for each symbol. For example, "1945" is four syllables and "IRA" is three syllables, and "&" is one syllable.

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This "extended graph" does not outmode or render the earlier (1968) version inoperative or inaccurate; it is an extension.

*Rutgers, The State University of New Jersey, Reading Center, Graduate School of Education, New Brunswick, New Jersey.

In summary, the readability of the follow-up instrument should be considered in writing the draft, not when the draft version is completed. All follow-up instruments should be pilot tested by a group of present or former vocational students representative of the instrument's target audience. Three alternative approaches to conducting the pilot test include: (1) give instructions, distribute, and collect instrument; (2) conduct interviews after instrument has been completed; or (3) distribute instrument with instructions, then conduct telephone interviews.

The instrument designer should then apply a readability formula to the draft instrument in order to obtain its approximate grade level score. Based on data collected in the pilot test and the readability formula stages, any required modifications or improvements should be made. The revised follow-up instrument is now ready to be used in the data collection process.

## Instrument Reliability and Validity

When conducting a follow-up study, you must be concerned with the quality of data. And it is through using certain procedures in sampling, data collection, and analysis that you can increase the probability of obtaining reliable and valid data.

First, what do reliability and validity actually mean? Oppenheim relates reliability to consistency, to obtaining the same results again.[65] Validity tells us whether the question or item really measures what it is supposed to measure.[66]

Measurement problems. According to Phillips, the major problem in evaluating the results of any measurement procedure is determining what shall be considered as true differences in whatever it is the individual is attempting to measure and what shall be considered as variation due to errors in measurement.[67] Further, a list of several possible sources of differences among individuals on various measures can include:

- True differences in the characteristics which one is attempting to measure
- True differences in other relatively stable characteristics of the individual which affect her/his score

- Differences due to transient personal factors
- Differences arising from situational factors
- Differences because of variations in administration
- Differences due to sampling of items
- Differences resulting from an instrument's lack of clarity
- Differences due to mechanical factors
- Differences arising from factors in the analysis of the data[68]

Although no measurement is entirely free of error, minimizing errors should be the goal of those responsible for conducting the follow-up study. Errors can be classified as "constant" or "random":

- Constant (or biasing) errors are introduced into the measurement by some factor that systematically (in one direction or another) affects either that which is being measured or the process of measurement.
- Random errors, on the other hand, arise from those transient aspects of the individual, the measurement procedure, the situation of measurement, etc., that are apt to vary from one measurement to the next, even though that which is being measured has not changed. [69]

Phillips also finds that both random and constant errors affect estimates of "validity," while reliability is usually affected only by random errors.[70]

To determine reliability and validity of questions on the follow-up form, one should look primarily at the possibility of bias due to wording of questions, and at problems raised by the follow-up questionnaire procedures.

Techniques for determining the reliability and validity of factual questions. A fundamental rule to help in establishing reliability and validity is to define a criterion--an independent measure of some variable--to which the results of the questionnaire can be compared.[71] But often, particularly in using follow-up questionnaires,

the criteria are in many instances difficult to define objectively. However, this should not preclude one from making the effort to locate suitable criteria.

To establish a reliability factor in the case of factual questions, one should plan for a number of internal checks. One method is to ask the same question in more than one way. Another form of an internal check is to include erroneous items which, if given answers or endorsements, would suggest guessing or carelessness on the part of the respondent.

Another check is to readminister the questionnaire. But, when making this check be careful not to allow too much time to pass before readministering survey; true changes in status or behavior may occur in the interval which would affect the outcome of this comparison.

In a reliability study of one follow-up questionnaire, the analysis was based on the consistency of group responses which were categorized according to their rate of response: early-returners, intermediate-returners, and late-returners. Pucel and Luftig concluded that data gathered from the student questionnaire were sufficiently reliable to be used for decision making[72].

The content validity of the follow-up instruments can be defined as the relevance of the survey items to the actual needs of students and/or outcomes of the vocational program. Therefore, content validity might be enhanced through an interactive item generation and review process that involves multiple sources of information. For example, information about needs should be sought from a variety of individuals representing vocational education--teachers, directors, guidance counselors, students, and employers.

Nunnally and Durham list two major standards for ensuring content validity: (1) a representative collection of items, and (2) "sensible" methods of instrument construction.[73]

To determine the validity of factual questions, certain checks may be made. One is to obtain a second, independent source of information. For example, responses on certain questions can be cross-checked with a former vocational student, teacher, present employer, or parent. In determining the validity of follow-up responses with regard to defining a declared occupational title, Adams, Morton, and Frazier find no significant differences in the way

students and teachers answer these follow-up questions.[74] Others believe, however, that follow-up information based on teachers' knowledge about a student is less valid than information obtained directly from the student.

One other method to approach validation is to compare present findings with results of other follow-up studies. If there are serious differences, it will be difficult to know which set of results is more valid.[75] Hence, we can say that routine fact-gathering to determine reliability and validity is not as free from problems as may be commonly thought. But this should not preclude one from conducting accepted methods for determining reliability and validity.

The best way to determine if directions and questions are clearly stated is to pretest the questionnaire in order to see if these elements are understood and can be answered. The instrument should be pretested with current students as well as former students. Students may be asked to participate in the decisions concerning type of data to be collected, type of questions to be asked, wording of the questions, and designing of the instrument (including the physical appearance of the survey form). Time given to pretesting can save hours of labor by significantly improving the response rate, reducing missing data, and increasing the reliability of the instrument. Under the press of time, this step is frequently overlooked or given only minor attention.

In summary, the reliability and validicy of a follow-up questionnaire can best be accomplished by submitting it to critical experts who will attempt to "pick the questionnaire apart." It should then be submitted to a trial use on a small number of respondents. Such an empirical trial will determine if the questionnaire needs improvements, simplifications, or revisions in presentation or arrangement; if the instructions and questions are clear; if each question is so worded as to evoke the same interpretation from all respondents; and if the interpretation is the one needed to obtain the information the questionnaire was designed to obtain.

For further information and detailed discussion on reliability and validity of questionnaires, you are encouraged to review:

- Construction of Questionnaires (Duckworth, 1973)
- Questionnaire Design and Attitude Measurement (Oppenheim, 1966)

- Reliability of the Minnesota Vocational Follow-up Student Questionnaire (Pucel and Luftig, 1975)

- Parallel Follow-up (Adams, Morton, and Frazier, 1974)

## Sampling Concepts and Procedures

Follow-up studies usually involve gathering information about a group that comprises a finite population. For example, in a follow-up study on special populations, the designated sub-population might be female/male handicapped completers from a Guidance of Children program of the ABC Area Vocational School from 1971 to 1973. The optimal method for collecting information on these graduates is questioning every member of the population. A more feasible method is to design a sampling plan to gather information from a portion of the population, and then to use these results to make inferences about the entire population. This section will describe the purpose of sampling, the characteristics of a good sample, probability and non-probability sampling, sampling strategies, and sample size.

Purpose of sampling. Backstrom and Hursh define sampling as the procedure by which we can infer the characteristics of a large body of people (a population), although we talk with only a few persons (a sample).[76] Thus, in sampling, we "take" any portion of a population or universe as representative of that population or universe. This definition does not say that the sample taken--or drawn, as researchers say--is representative; but rather, it says, the portion of the population taken is considered to be representative.[77]

Sampling is used in follow-up studies and other types of evaluation and research endeavors for a number of reasons. Primarily, samples are drawn because it is not practical to evaluate the training and/or post-school experiences of all former students. Nor is it practical to question every person who employs a graduate of a training program. Therefore, by drawing a representative sample of the total population, one can obtain follow-up information in a more cost and time efficient manner.

Characteristics of a good sample. According to Backstrom and Hursh, a good sample is based on the theory that it:

1. Provides ways to determine the number of respondents needed

2. Specifies the chance (probability) that any person will be included in the sample

3. Enables us to estimate how much error results from interviewing a sample of people instead of interviewing all of them

4. Lets us determine the degree of confidence that can be placed in population estimates made from the sample [78]

However, there are two minimum requirements: (1) the sample must be adequate in size so estimates about the characteristics of the population can be made with relative precision, and (2) the sample must include people who together are representative of the population.[79]

Sampling procedures. Sampling procedures have been classified under various categories. We will focus on two here: probability and non-probability.

In probability sampling, members of the population are chosen by chance--for example, by flipping coins, drawing numbers out of a hat, or using a table of random numbers.[80] It is based upon the proposition that every member of the population has an equal chance of being included in the sample and that there is a known probability for the selection of each member of the population to participate in the sample.

Warwick and Lininger define non-probability sampling as any methods in which units are not selected by chance procedures or with known probabilities of selection. Therefore, every member of the population does not have an equal chance of being selected, because the aim is to include specific people or groups of people in the sample.[81]

Probability sampling. There are several variations in probability sampling, but all share a common trait: the selection of units (or members) for the sample is carried out by chance procedures and with known probabilities of selection. Five variations are presented below:

- Simple random sampling exists if a sample is selected from a population in which all possible combinations of n units as formed from the population of N elementary units have the same chance of being included.[82] In other words, simple random sampling is a procedure whereby all members of the sample are chosen individually or directly through a random process in which each member of the population has an equal chance of being selected. Thus, to draw a simple random sample, each member of the total population must be clearly identified.

  There are two options in regard to simple random sampling. One is sampling with replacement, and and the other is sampling without replacement. Sampling with replacement is accomplished by replacing the unit in the selection pool each time it is chosen. Sampling without replacement means that the remaining units in the pool have an increasing chance of being selected since the absolute size of the pool decreases.

- Cluster sampling is a procedure whereby the selection of sample members is chosen from the total population in groups or clusters rather than individual persons.[83] The clusters selected are often natural or administrative groups of the population (e.g., intermediate units, county schools). Warwick and Lininger cite increased convenience and reduced costs as advantages to cluster sampling. The major disadvantage to cluster sampling is the likelihood of increased sampling error; as the size of the sample increases, the size of the standard error decreases.[84]

- Systematic selection is a method of selecting units from a list through the application of a selection interval, I, so that every Ith unit on the list, following a random start, is included in the sample.[85] For example, if there are 1000 former vocational students classified as handicapped and 100 are to be surveyed, every tenth student from the list is chosen to comprise the sample. The main advantage of systematic selection is simplicity and ease of administration.

- Stratified sampling involves dividing the population into subpopulations or strata and then selecting a sample within each stratum.[86] In general, stratified sampling is composed of the following steps:

(a) the entire population is divided into distinct subpopulations, called strata; (b) within each stratum a separate sample is selected from all the sampling units, composing that stratum; (c) from the sample obtained in each stratum, a separate stratum mean (or other statistic) is computed. These stratum means are properly weighted to form a combined estimate for the entire population; (d) the variances are also computed separately within each stratum and then properly weighted and added into a combined estimate for the population.[87]

The major advantages of stratified sampling as defined by Parten follow: (1) There is certainty that all essential groups will be included in the sample. This increases the representativeness of the sample and reduces the possibility of an important variable (age, sex, religion, etc.) being excluded. (2) It reduces the number of cases required to ensure representativeness. (3) It reduces bias which arises from self-selection. (4) It minimizes costs because the sample is generally more geographically concentrated.[88]

There are several disadvantages to stratified sampling: (1) Stratification requires prior knowledge of the control variable. For example, if the control variable is vocational programs for the disadvantaged, one must know the vocational program distribution of the population. (2) If disproportionate stratification is used the results must be weighted. In order to satisfy this requirement, information about the relative frequency of each stratum within the population must be known. (3) One may find it difficult to find elements to fit the strata. (4) Disproportionate sampling requires weighting, which increases the cost of the data analysis.[89]

- Unequal probabilities of selection (UPS) chooses sampling units by a procedure giving some elements a higher or lower chance of selection than others. Therefore, the UPS sample includes proportionally more of the oversampled cases. One reason for adopting UPS has to do with stratification. A subgroup of the population (minority group or a particular vocational program area) may be extremely important in meeting analysis objectives and yet very small relative to the total

population. When using sampling units of widely different sizes, such as those groups designated as special populations, the UPS sample is preferable. Another advantage is that UPS reduces costs of sampling and/or interviewing.

Negative factors include the need to assign compensating weights to sample elements, and to apply them during analysis. Used alone, a sample drawn according to UPS procedures would give a picture of the population. The oversampled strata or elements would carry more weight than they deserve, while the rest would be underrepresented. Other problems in using UPS procedures may arise from the researcher's inexperience in working with weighted data or the lack of appropriate data processing equipment. Any tabulation or calculation based on weighted data is more complicated than the same operation carried out with unweighted data. The more intricate the analysis, the greater the complexities.[90]

- Multi-stage sampling is a procedure for selecting a sample in two or more successive, contingent stages.[91] The major advantages of multi-stage sampling are convenience and economy. Sample preparation costs are greatly reduced by the fact that this sampling does not require complete lists of individual elements in the population. A major disadvantage is the increased sampling error arising from the selection of sample cases in groups rather than individually. For a more detailed description of the procedures involved in doing multi-stage sampling see: The Sample Survey: Theory and Practice. "Illustration: A Multi-stage Area Sample," (Warwick and Lininger, 1975).

Non-probability sampling procedures. Three variations include:

- Haphazard sampling which involves the selection of individuals on a convenience basis--for example, students enrolled in a particular class or people passing by one street corner.

- Judgment sampling which involves the selection of samples by individuals using their own discretion about the representativeness of individual sample elements.

- Quota sampling which involves the selection of persons from predetermined categories to obtain a specific number of cases in each category. This selection is done by persons responsible for the data collection.[92]

Sample size. There are no absolute standards regarding the proper size of a sample. Tables appear in the literature which can provide "guesstimates" of the appropriate sample size.* However, there are some helpful hints to bear in mind when determining your sample size.

1. The more homogeneous the population, the smaller the sample can be since everyone is theoretically alike.

2. The more time, personnel, and money available, the larger the sample can be.

3. The more categories by which the sample data are to be generalized (e.g., age, sex, type of vocational education program), the larger the sample must be in order to ensure that there are enough respondents in each group so that valid inferences may be made.

4. The more certain you want to be that you reach the right decision based upon the sample information, the larger the sample you will need.[93]

Thus, while samples that are too small threaten the accuracy of the results, those that are too large waste resources. Therefore, it is imperative that the number of respondents chosen (the sample size) be sufficiently representative of the entire population.

A systematic sampling procedure was recommended in a comprehensive study for the U. S. Office of Education to identify sample designs for the state follow-up of former vocational education students. The study proposed that the actual sampling be done centrally at the state level rather than at the individual schools in order to increase the representativeness of the sample and to reduce costs. The study also recommended a proposed sample size for each state and territory, and sampling rate

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*See Survey Research, p. 33 (Backstrom and Hursch, 1963) and Guide to Sensible Surveys, p. 67 (Orlich, et al., 1975).

based on the number of completions reported to the U. S. Office of Education for Fiscal Year 1975. Although these proposed sampling rates and the sample sizes proposed should not be regarded as absolutes, or adopted unquestioningly by any state planning an ongoing follow-up survey, they should be seen as representing a judgment of what may be a reasonable compromise between the conflicting considerations of cost and reliability.[94]

Drawing a random sample. In order to minimize bias, a random sampling procedure should be used to ensure that all cases or elements of a population have an equal chance of being included in the sample.

Two techniques often used to draw a random sample include the lottery method and the table of random numbers. In both cases the methods for drawing the sample can be done either manually or by computer. Various statistical packages provide computer programs which, with minimal input requirements, will draw a random sample.

One should use the lottery method when drawing a small sample. One method requires the placing of numbered pieces of paper or cards in a container. Then one draws the number of cards or pieces of paper required for the sample. Variations of this procedure include using a roulette or bingo wheel or by simply flipping a coin.

Use a table of random numbers for drawing large samples. This method minimizes bias more than the previously described lottery method.[95]

Tables of random numbers can be found in many research and statistics text books. The procedure for manually drawing a random sample includes the following stages:

1. Identify population and appropriate sample size.
2. Number all cases in the population serially starting with 00.
3. To determine the starting point, close your eyes, and place a pointer on the table of random numbers.
4. Then reading, horizontally, vertically, or diagonally, read the numbers to be selected until the total sample is drawn.

For example, suppose one needed to draw a sample of ten Health Assistant curriculum graduates from a population of 32 former vocational education students classified as economically disadvantaged. First, number each former student starting with 00 until all students received a numerical assignment. Then identify a pre-established starting point by closing ones eyes and letting a finger fall at some spot on a page of the table of random numbers. Next, read the closest two digits above the fingernail. Use the first two digits to identify the row, the last two to identify the column. Then select ten numbers. For example, if the starting point was selected in row 2, column 1 and one read the numbers vertically, the sample would consist of individuals assigned to the following numbers: 00, 31, 30, 29, 06, 12, 24, 15, 09, 19.

00 - Pedro Jones
01 - Maria Jones
o
o
o
31 - Seon Jones
32 - Anne Jones

| | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 53 | 74 | 91 | 41 | 89 | 77 | 01 | 99 | 40 | 50 |
| 02 | 00 | 84 | 02 | 04 | | | | | | |
| 03 | 31 | 06 | 64 | 10 | | | | | | |
| 04 | 74 | 12 | 72 | 13 | | | | | | |
| 05 | 30 | 24 | 59 | 15 | | | | | | |
| 06 | 50 | 47 | | | | | | | | |
| 07 | 60 | 15 | | | | | | | | |
| 08 | 92 | 09 | | | | | | | | |
| 09 | 29 | 96 | | | | | | | | |
| 10 | 35 | 19 | | | | | | | | |

One would start in row 2, column 1, select the first individual with the value 00, then proceed down the column. One would continue by going to the next column and so on, using a vertical reading pattern until the sample of ten is chosen from numbers 00 through 32.

Individuals who have access to computers may find that using a computer program to draw a sample is far easier and more time saving. This is true if large samples are needed.

In summary, while careful sampling is extremely important in survey research, it is but one part of an integral process. Sampling is only one of several sources of error. The quality of the questionnaire, the overall response rate in interviewing, and the interviewing and reliability of the coding are other factors which influence the accuracy

of the data. Thus, in planning a follow-up survey, one should aim for an adequate balance of precision and quality at all stages. There is little to be gained from a very precise sample which is undercut by a low response rate, poor data collection procedures, and reporting errors.

The following checklist presents five important factors to consider in developing the sampling plan. Figure 5-10 provides a summary of sampling procedures, and Figure 5-11 defines the various decision-making steps involved in the development of the appropriate sampling procedure.

**Checklist for Sampling Procedures**

| Yes | No | Does your follow-up system's sample provide the following: |
|---|---|---|
| ___ | ___ | 1. The desired information, accurately, at the desired price? |
| ___ | ___ | 2. Random sample selection by:<br>a) simple random sampling?<br>b) stratified sampling?<br>c) cluster sampling?<br>d) systematic selection?<br>e) unequal probabilities of selection?<br>f) multistage sampling? |
| ___ | ___ | 3. Non-random sample selection by:<br>a) haphazard collection?<br>b) judgment sampling?<br>c) quota sampling? |
| ___ | ___ | 4. An appropriate sample size statistically defined? |
| ___ | ___ | 5. Response rate statistically identified? |

## Figure 5-10

## Sampling Chart

| Type of Sampling | Brief Description | Advantages | Disadvantages |
|---|---|---|---|
| A. Simple random | Assign to each population member a unique number; select sample items by use of random numbers. | 1. Requires minimum knowledge of population in advance.<br>2. Free of possible classification errors.<br>3. Easy to analyze data and compute errors. | 1. Does not make use of knowledge of population which researcher may have.<br>2. Larger errors for same sample size than in stratified sampling. |
| B. Systematic | Use natural ordering or order population; select random starting point between 1 and the nearest integer to the sampling ratio (N/n); select times at interval of nearest integer to sampling ratio. | 1. If population is ordered with respect to pertinent property, gives stratification effect, and hence reduces variability compared to A.<br>2. Simplicity of drawing sample; easy to check. | 1. If sampling interval is related to periodic ordering of the population, increased variability may be introduced.<br>2. Estimates of error likely to be high where there is stratification effect. |
| C. Multistage random | Use a form of random sampling in each of the sampling stages where there are at least two stages. | 1. Sampling lists, identification, and numbering required only for members of sampling units selected in sample.<br>2. If sampling units are geographically defined, cuts down field costs (i.e., travel). | 1. Errors likely to be larger than in A or B for same sample size.<br>2. Errors increase as number of sampling units selected decreases. |
| 1. With probability proportionate to their size. | Select sampling units with probability proportionate to their size. | 1. Reduces variability. | 1. Lack of knowledge of size of each sampling unit before selecting increases variability. |
| D. Stratified<br>1. Proportionate | Select from every sampling unit at other than last stage a random sample proportionate to size of sampling unit. | 1. Assures representativeness with respect to property which forms basis of classifying units; therefore yields less variability than A or C.<br>2. Decreased chance of failing to include members of population because of classification process.<br>3. Characteristics of each stratum can be estimated and hence comparisons can be made. | 1. Requires accurate information on proportion of population in each stratum, otherwise increases error.<br>2. If stratified lists are not available, may be costly to prepare them; possibility of faulty classification and hence increase in variability. |
| 2. Optimum allocation | Same as 1 except sample is proportionate to variability within strata as well as their size. | 1. Less variability for same sample size than 1. | 1. Requires knowledge of variability of pertinent characteristic within state. |
| 3. Disproportionate | Same as 1 except that size of sample is not proportionate to size of sampling unit but is dictated by analytical considerations or convenience. | 1. More efficient than 1 for comparison of strata or where different errors are optimum for different strata. | 1. Less efficient than 1 for determining population characterictics; i.e., more variability for same sample size. |

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Reprinted from Russell L. Ackoff, The Design of Social Research (Chicago: University of Chicago, 1953), p. 124. By permission from The University of Chicago Press. Copyright 1953 by The University of Chicago.

## Figure 5-10 —Continued

| Type of Sampling | Brief Description | Advantages | Disadvantages |
|---|---|---|---|
| E. Cluster | Select sampling units by some form of random sampling; ultimate units are groups; select these at random and take a complete count of each. | 1. If clusters are geographically defined, yields lowest field costs.<br>2. Requires listing only individuals in selected clusters.<br>3. Characteristics of clusters as well of those of population can be estimated.<br>4. Can be used for subsequent samples, since clusters, not individuals, are selected, and substitution of individuals may be permissible. | 1. Larger errors for comparable size than other probability samples.<br>2. Requires ability to assign each member of population uniquely to a cluster; inability to do so may result in duplication or omission of individuals. |
| F. Stratified cluster | Select clusters at random from every sampling unit. | 1. Reduces variability of plain cluster sampling. | 1. Disadvantages of stratified sampling added to those of cluster properties.<br>2. Since cluster properties may change, advantage of stratification may be reduced and made sample unusable for later research. |
| G. Repetitive: Multiple or Sequential | Two or more samples of any of the above types are taken, using results from earlier samples to design later ones, or determine if they are necessary. | 1. Provides estimates of population characteristics which facilitate efficient planning of succeeding sample, therefore reduces error of final estimate.<br>2. In the long run reduces number of observations required. | 1. Complicates administration of field work.<br>2. More computation and analysis required than in non-repetitive sampling.<br>3. Sequential sampling can only be used where a very small sample can approximate representativeness and where the number of observations can be increased conveniently at any stage of the research. |
| H. Judgment | Select a subgroup of the population which, on the basis of available information, can be judged to be representative of the total population; take a complete count or sub-sample of this group. | 1. Reduces cost of preparing sample and field work, since ultimate units can be selected so that they are close together. | 1. Variability and bias of estimates cannot be measured or controlled. |
| I. Quota | Classify population by pertinent properties; determine desired proportion of sample from each class; fix quotas for each observer. | 1. Same as above.<br>2. Introduces some stratification effect. | 1. Introduces bias of observers' classification of subjects and non-random selection within classes. |

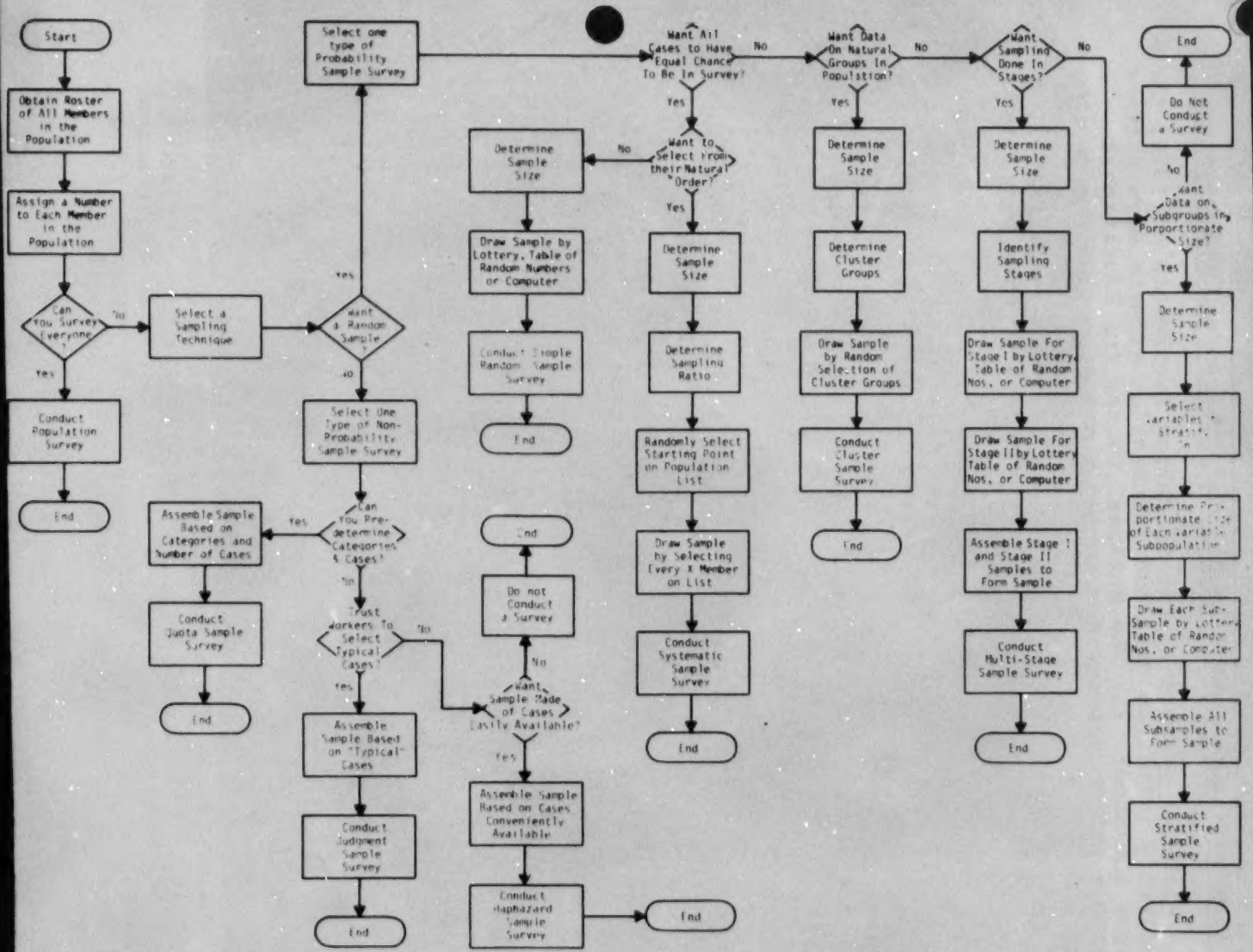
Start
Obtain Roster of All Members in the Population
Assign a Number to Each Member in the Population
Can You Survey Everyone?
yes
no
Conduct Population Survey
End
Select a Sampling Technique
Want a Random Sample?
yes
no
Select one type of Probability Sample Survey
Select One Type of Non-Probability Sample Survey
Can You Pre-determine Categories & Cases?
yes
no
Assemble Sample Based on Categories and Number of Cases
Conduct Quota Sample Survey
End
Trust Workers To Select Typical Cases?
yes
no
Assemble Sample Based on "Typical" Cases
Conduct Judgment Sample Survey
End
Want Sample Made of Cases Easily Available?
yes
no
Assemble Sample Based on Cases Conveniently Available
Conduct Haphazard Sample Survey
End
Do not Conduct a Survey
End
Want All Cases to Have Equal Chance To Be In Survey?
Yes
No
Want to Select From their Natural Order?
Yes
No
Determine Sample Size
Draw Sample by Lottery, Table of Random Numbers or Computer
Conduct Simple Random Sample Survey
End
Determine Sample Size
Determine Sampling Ratio
Randomly Select Starting Point on Population List
Draw Sample by Selecting Every X Member on List
Conduct Systematic Sample Survey
End
Want Data On Natural Groups In Population?
Yes
No
Determine Sample Size
Determine Cluster Groups
Draw Sample by Random Selection of Cluster Groups
Conduct Cluster Sample Survey
End
Want Sampling Done In Stages?
Yes
No
Determine Sample Size
Identify Sampling Stages
Draw Sample For Stage I by Lottery, Table of Random Nos. or Computer
Draw Sample For Stage II by Lottery, Table of Random Nos. or Computer
Assemble Stage I and Stage II Samples to Form Sample
Conduct Multi-Stage Sample Survey
End
End
Do Not Conduct a Survey
Want Data on Subgroups in Proportionate Size?
no
yes
Determine Sample Size
Select Variables to Stratify On
Determine Proportionate Size of Each Variable Subpopulation
Draw Each Sub-Sample by Lottery, Table of Random Nos. or Computer
Assemble All Subsamples to Form Sample
Conduct Stratified Sample Survey
End

**Figure 5-11**
**Flowchart for Making Sample Design Decisions**

## Follow-up Studies and National Information and Data Systems

With the passage of the Education Amendments of 1976, three federally initiated data and information efforts were started. These included: (1) The National Center for Educational Statistics' Vocational Education Data System (VEDS), (2) the Departments' of Labor and Health, Education and Welfare National Occupational Information Coordinating Committee (NOICC), (3) and the NOICC counterpart in each state, the State Occupational Information Coordinating Committee (SOICC).

Procedures developed for conducting follow-up studies of the special populations should reflect the requirements of these national information and data systems. The following narrative outlines tenative requirements of three information systems. These systems are in an evolving stage of development, however, the proposed ideas should be considered in designing follow-up studies for the special populations.

The Vocational Education Data System.* The following information was obtained from the VEDS feasibility studies. The VEDS system proposes to require states to collect follow-up data from former vocational education students and their employers. These include the Completer-Leaver Follow-up Form** and the Employer Follow-up Report. The proposed former student follow-up forms would require the following data and information:

- Education status
- Employment status
- Employer, supervisor, job title, and job duties
- Job relatedness to training
- Current salary
- Hours employed per week

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*Source: The information for this subsection was obtained from the following: (1) Draft forms for release at the Annual Meeting of the American Vocational Information Association (AVIA), Oklahoma City, Oklahoma, May 22-24, 1978; (2) Wolfsburg, R. "VEDS Feasibility Study," presented at EPDA Inservice Workshop for State Planners/Evaluators. Oklahoma City, Oklahoma, March 28-30, 1978; and (3) National Vocational Education Data System Workshop (material prepared by the RMC Research Corporation) November 13-17, 1978, Chicago, Illinois.

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**See Appendix A, pp. 240-241, for copies of proposed VEDS Follow-up Forms.

The completer-leaver(high school, postsecondary, adult) Follow-up Report will be divided into four parts. Part A presents information on the employment status of the follow-up sample for each instructional program. Part B describes the employment status of the follow-up sample by racial/ethnic designation and sex. Part C describes the employment status of those individuals in the follow-up sample who are handicapped. Finally, Part D presents, for each program, the field of employment and average hourly salary of those individuals in the follow-up sample who were employed.

The Employer Follow-up Report will be divided into three parts. Part A summarizes the mean employer ratings by instructional program of the former student. Part B looks at the average ratings by racial/ethnic designation and sex of the former student. Part C presents average employer ratings by the level of the program and the completion status of the former students.

The VEDS data requirements for the follow-up of employers would include information obtained from the supervisor for the most current employment cited by each completer and leaver in the student sample. The specific data elements include:

- Evaluation of technical skills (compared to others in the same work group)*
  - Job knowledge: technical information possessed
  - Readiness to learn new techniques on the job
  - Productivity, ability to meet quantity demands
  - Accuracy of work, quality and thoroughness
  - Did student require any on-the-job training?

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*The employers would be asked to rate the individual on those data elements according to the following criteria:

A - Did not meet requirements
B - Usually met but rarely exceeded minimum requirements
C - Met and sometimes exceeded requirements
D - Exceeded requirements to an exceptional degree
E - Irrelevant or no opportunity to observe employee's performance

- o Evaluation of job readiness (compared to others in the same work group)

  - Positive attitude toward work
  - Realistic concept of what job involves
  - Dependability, attendance, and punctuality
  - Initiative, to perform job tasks
  - Ability to get along with others
  - Judgment, ability to make decisions, plan, organize

The proposed follow-up activities would be conducted in February of the appropriate fiscal year. Those former vocational students to be followed-up include completers and leavers of those programs of Part A of the program enrollment and termination report (enrollment will be counted upon official entrance into a vocational education program at the level at which a vocational objective can be stated or implied). Only persons enrolled in a course, service, or activity uniquely and specifically associated with a six-digit program code will be reported here. No enrollment below the ninth grade will be reported. Also, the reporting is limited to those programs covered by the State Plan. Furthermore, the universe is restricted to high school students, postsecondary students, and adult students enrolled in long-term programs (at least 500 contact hours in length).

Employer follow-up forms would be sent only to the employers of those students who indicated that they were employed (either civilian or military) in the student follow-up form (NCES 2404-5). Two forms of sampling are proposed in the VEDS follow-up component.

In the first sampling option, a state may elect to partition its school districts and postsecondary institutions (LEA/PSIs) into a maximum of five groups of LEA/PSIs. The state may then restrict its follow-up activities to one group of LEA/PSIs per year, rotating to the next group in the next year so that in, at most, a five-year cycle each LEA/PSI will have been included in the follow-up activities.

The adoption of this strategy is subject to the following restrictions:

1. Each group of local education agencies and postsecondary institutions (LEA/PSIs) must have approximately the same total number of "Part A enrollments." That is, if the state elects to

partition its LEA/PSIs into five groups, then each group shall account for approximately 20 percent of the total "Part A enrollments."

2. Insofar as possible under the constraint above, each group shall have approximately the same enrollments in each Part A program.

3. Before any state could adopt this strategy (which allows for the follow-up of less than the total follow-up of universe in each year) that state must submit a technical sampling plan to NCES and receive approval in writing from NCES for that plan. The sampling plan must contain the following:

   a. A list of the LEA/PSIs in each group
   b. The total enrollment of each "Part A" program for each group for the most recent years
   c. A determination of which group(s) is going to be followed up in which year(s)
   d. A rationale for how the groups were determined
   e. A discussion of the degree to which each group is representative of the state

4. The intent in permitting this extensive use of sampling is to reduce the cost and effort required to conduct the follow-up activities. The trade-off that NCES expects is that those states adopting a plan which includes less than the total universe each year will devote extra attention to obtaining quality data with acceptably high response rates.

The second form of sampling occurs with respect to those leavers who completed at most half (50 percent) of the program. Specifically, within the group of LEA/PSIs which is to be followed up in the current year, the following completers and leavers must be followed up:

1. All completers

2. All leavers who completed more than 50 percent of the program

3. Ten percent of the leavers who completed <u>at most</u> 50 percent of the program

National and State Occupational Information Coordination Committees.* With the establishment of the National Occupational Information Coordinating Committee (NOICC) and its counterpart, the State Occupational Information Coordinating Committee (SOICC), Congress intended to legislate a more integrated education and training system in the United States. Through the passage of the Education Amendments of 1976, Section 161(b), attention was drawn to the need to deal with data and information systems for and among education and training programs. NOICC's charter, concisely stated, is to:

1. Improve communication and coordination

2. Develop and implement an occupational information system

With improved communication, it is anticipated that education and training planners, operators, and administrators will better understand the importance of occupational data and information, the value of such information, and how information can be most effectively used.

The NOICC/SOICC network can become an effective tool in improving communication and coordination. The "bottom line" measures must be in terms of the impact on program structures. The NOICC/SOICC network will work toward eliminating duplicative survey activities in labor markets or other substate areas, and assist in increasing the number of completers (of education and training programs) who find jobs in the local markets. By accomplishing those objectives, the network believes that they will have begun to achieve the congressional intent.

The second mandate is the development and implementation of an occupational information system. This system must go beyond the supply/demand information stage and incorporate data on wages and salaries, information on training opportunities, information on career ladders, and the myriad of other data and information needed by various users. As stated earlier, here is where the follow-up system or study, specifically interfaces with NOICC and SOICC; it can provide for many of those data elements or in validating certain data.

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*Source: Davis A. Porter, "NOICC/SOICC Goals and Objectives" (A presentation delivered at the State Occupational Orientation Session, Washington, D. C., 1977).

The position and/or function of SOICCs is still to be determined in many states; however, some of the technical areas that are and will be of concern to SOICCs include: program planning, curriculum design, data collection (including both administrative data systems and general purpose systems), program implementation, program evaluation, and follow-up.

In summary, the VEDS proposes a follow-up component which defines a minimum data base for state efforts in conducting follow-up. The NOICC and SOICC focus on occupational information for planning and programming which data from follow-up studies can be integrally related. Specifically, the identification of completers, jobs obtained, wages, and salary are types of elements that can be used to help build a NOICC and SOICC data base. The personnel at both the SEA and LEA level must be acquainted with the purposes and operation of the National Information and Data Systems. As these systems are further developed and become fully operational the individuals responsible for conducting follow-up studies at the state and local levels should establish cooperative working relationships with those national systems.

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SECTION 6

# USING FOLLOW-UP DATA AND STUDIES

## SECTION 6

## USING FOLLOW-UP DATA AND STUDIES

In section 1, the rationale for evaluation and follow-up studies of special populations was discussed. Although it is not necessary to reiterate the rationale here, the reader should bear in mind that follow-up studies are a type of summative evaluation activity. The information gleaned from the follow-up studies should aid in decision making if the data are analyzed properly and reported effectively.

Proper data analysis and effective report preparation are significant determinates in the use of follow-up data and information. One example of an effective reporting of a follow-up study of high school dropouts is found in Appendix G. This brochure received the 1977 award from the American Educational Research Association, Division H, Evaluation as the "Best Evaluation Report Brochure."

The reader is encouraged to review section 5, "Data Analysis and Reporting Procedures," in Evaluation Handbook: Guidelines and Practices for Follow-up Studies, Volume One. Guidelines for interpreting data and the organizaton and formating of follow-up reports are highlighted.

The results of a follow-up study can be used for a variety of purposes. Within the educational agency, the report can provide a base for making decisions regarding such areas as programs, services, and equipment for special populations. For those not directly connected with the educational agency, the follow-up results can best serve as an account of the school's success in preparing students for work. Because the audiences for the follow-up study differ and because follow-up information is used in different ways, reports presenting follow-up data should be tailored to specific needs of the intended audience. Basic factors to be considered in the use and applicability of any follow-up data are found in Figure 6-1.

Follow-up studies are primarily status reports. Their use is based on two assumptions: (1) that the status of a group of former vocational students in the future will be similar to that of a previous group unless changes are made

**Figure 6-1**

**Considerations in the Use and Applicability of Follow-up Data**

1. Change usually takes place on the school and classroom levels. All personnel who might be affected by anticipated changes should be involved in the design of follow-up studies.

2. Follow-up information can be used to substantiate quality programs and positive situations. It should not be viewed solely as a program designed to reveal weaknesses.

3. Follow-up information tends to reveal what kind of courses and programs students should not be trained in. It cannot always reveal what alternative courses should be offered.

4. While data from the follow-up process can be used to assess teacher effectiveness, it must be remembered that students often tend to rate courses according to their feelings about the teachers. Teachers rated low may be excellent teachers.

5. Follow-up data many times provide the impetus for change but should rarely be the sole cause of or basis for change. Information must be gathered from as many sources as possible before action is taken.

6. Studies may indicate certain areas of concern, but many times there is no follow-through on them. It is the job of the appropriate administrator to use the information to make needed changes.

7. Some administrators and teachers are not convinced of the benefits of using follow-up data. These benefits must be revealed if the information is to be used effectively.

8. Some administrators and teachers feel threatened by the revealing look at the conditions in their institutions provided by follow-up studies. This threat must be minimized to ensure the best use of the data.

9. Follow-up is a slow process: it may take several years for significant trends in follow-up data to appear. If a significant trend or point in the data appears to emerge, it should be checked against information from as many sources as possible.

and, (2) that the conclusions and recommendations included in a report of follow-up data are valuable in guiding decisions about changes to make to improve the status of future groups.

As a first step, those persons directly connected with the educational agency should determine if the recommendations relate to:

1. Policy (e.g., program focus in regard to students and community/labor market)

2. Staff (e.g., inservice training on new instructional materials)

3. Services (e.g., student selection of programs)

4. Programs (e.g., modifications that reflect new skill requirements)

5. Equipment (e.g., purchase of adaptive devices to aid the handicapped in performing the skills required in industry)

Policy changes, which can have far-reaching consequences, can be made only by top-level administrators in conjunction with school boards. Decisions that do not affect policy or the budget should involve those directly influenced by the consequences of the decision. If a suggested change is related to curriculum content, for example, then only the local advisory committee(s), instructor(s), and curriculum coordinator should decide on the change.

The follow-up report can also influence the decisions of those not directly connected with the educational agency. But persons or groups outside the educational agency can only suggest that certain decisions be made and have little or no authority to implement change. Perhaps the greatest impact a follow-up study has on persons outside the educational agency is on attitude: the public's attitude is directly related to how well they think the school/college prepares students. Certainly, one of the most significant uses that the public can make of follow-up is to help determine the quality of the school's programs. And this determination can be the basis for decisions to provide--or not to provide--financial support for an educational program and/or agency.

## Follow-up and the Management Information System(MIS)

Two of the process objectives of a vocational education management information system include collecting data and developing a comprehensive data file. A critical component of

such a file is follow-up data on former vocational students. This data can be analyzed to support the decision making process. The extent to which a management information system supports the decision making process is the key to that system's effectiveness.

One advantage of a MIS is the level of detailed information it makes available regarding individual students and/or programs. Combining the information collected by a follow-up study with other evaluation data provides a basis for a detailed analysis to identify problem areas and probable causes. For example, a data analysis might reveal the following information about a student:

1. A low grade point average
2. An excessive number of absences during each of the previous two years
3. Social problems while in school and/or on the job
4. Dissatisfaction with school programs and/or with the present job

Since all sections of the MIS can be made to interact, the system offers many advantages. For example, the MIS permits a decision maker to ask questions on the probable effects that a decision or a series of decisions related to one subsystem can have on the other subsystems. Thus, if it is tentatively decided that a number of different students with certain characteristics are to receive individualized training and group counseling on occupational mobility, then the MIS could be used to determine the possible implications of this decision in terms of facilities, space, extra cost, and added personnel as well.

When viewed from this perspective, follow-up information can be seen as a feedback component of the MIS. This component can be the basis for isolating possible causes of undesirable effects on students and for analyzing proposed changes in instruction, services, etc., to determine the potential effects. In other words, the MIS can be a dynamic management tool for analyzing needs, in forming decisions, and considering the probable effects of those decisions on the local educational agency.

## Using Follow-up Information for Policy Planning

Extensive planning and informed decision making are critical to the success of vocational education. A complex array of variables must be considered when designing programs for a comprehensive vocational education delivery system. Comprehensive planning requires decisions based on data collected from several agencies, including vital information collected through follow-up programs.

Determining educational policy decisions is a formidable task. It is evident that issues, however they are defined, are complicated and important. A cursory examination of almost any educational decision reveals a mind-boggling complex of inter-relationships and variables. Everything, it sometimes seems, is related to everything else.

Educational planning and decision making are extremely complex on any level. One must attempt to obtain as much pertinent information as possible while, at the same time, excluding irrelevant data, suppressing unprofitable interaction, and ignoring extraneous variables. One must focus attention on the exact problem while simultaneously considering the outcomes of all possible decisions.

Decisions regarding alternative approaches, positions, or procedures should all be based on objective information. The decision to maintain, expand, reduce, or eliminate a program, for example, can be reached reasonably only when data are present for comparison and analysis. Accordingly, data utilization of this nature not only aids those making decisions but also justifies the decisions to other individuals.

Follow-up data are essential to the establishment and assessment of goals and objectives, which are logical concomitants to effective planning and decision making. Administrators cannot develop and institute such items as comprehensive plans, capital outlay budgets, federal funding guide requests, school plant needs assessments, and curriculum guides without an extensive data base generated in part by a vigorous follow-up program. Similarly, the judicious planning of program or course objectives and teaching strategies can be done most effectively when the individuals involved have objective follow-up data at their disposal.

Innumerable variables are associated with educational change. The complexities that must be considered by educational planners offer evidence that as much information as can be obtained must provide the basis for educational decisions. While follow-up data are merely one segment of this total or necessary information, these data should never be underestimated as a crucial component for assessing the needs and relevance of vocational programs.

It appears that no magical formulas or hard and fast rules for successful use of follow-up information currently exist. Both those who generate and those who use follow-up data find it difficult to translate their successes into exact procedures for others to emulate. However, the

following instances drawn directly from the field may be considered helpful examples of the use of follow-up data by decision makers. These examples were selected as representative of the many types of change occurring within the schools and may be considered typical. While the descriptions pertain to programs for special populations or components available only in certain institutions or school districts, the principles behind them have broader application.

Example 1. Information from annual employer surveys in a large school district revealed that employers frequently commented that former vocational students lacked essential employability skills. A closer look indicated that some students did not know how to fill out employment applications, conduct themselves in job interviews, or keep jobs once they found them.

The vocational director, other administrators, and occupational specialists met and formulated a plan to prepare students for entering the job market. As a result, several large high schools in the district now offer "employability skills" as a separate course on the ninth or tenth-grade level. Furthermore, every high school, regardless of size, offers a unit of employability skills in certain academic and all vocational classes. The program has met with favorable comment from both employers and students, and recent survey data have tended to substantiate the conclusion that the new efforts have better prepared the district's students for the transition from school to work.

Example 2. Employer surveys conducted by a small community college revealed that some former business students were failing to meet the minimum typing performance standards required in certain occupations. The head of the business department checked the typing program and noted that testing procedures for typing speed and accuracy were not consistent with those used in business and industry. Because the employers' required word-per-minute rates were somewhat higher than the schools, some students were failing to meet minimum performance standards demanded in certain job situations.

Consultants among the business staff and individuals from government, business, and industry lead to the development of guidelines and procedures for teaching and testing the typing skills students would need on the job. Subsequent follow-up surveys have revealed a sharp drop in comments from employers about deficient typing skills among the college's former students.

Example 3. Enrollments in a machinist program at a small vocational school had been steadily declining for three years and had reached such a low level that the entire program was about to be phased out. While considering the fate of the program, the director analyzed the follow-up information to locate possible trends. Student comments revealed that many graduates complained of poor facilities and the use of obsolete, run-down equipment. Employer data indicated that most graduates had to be extensively retrained, apparently due to the minimal skill training within the program. Additional checks of employment trends and graduate placements, however, revealed that a definite need for machinists existed in the community.

Through consultations with other administrators and representatives from the state department of education, a decision was reached to attempt to revise and update the program. A state grant was obtained to aid in the revision of curricular material, and a federal grant was also awarded to increase funding for new equipment and facilities. Input from the local vocational advisory committee was elicited and utilized during the renovation of the program. The program now places a very high percentage of its graduates in jobs for which they are trained, and negative comments about the program have markedly decreased.

## Using Follow-up Data for Program Planning and Improvement

Great care must be taken in planning or improving programs on the basis of follow-up information. One must always remember that follow-up information tells only what happened and that it is difficult to determine the cause of something if only the effect is known. One must be especially careful, for example, of citing faculty course content as the cause of students' inability to find related work. Consider the following situation. A community college has a forestry technology program. However, consider this additional data: most states and the federal government require that applicants for jobs in forestry technology be of a certain age. Many of the graduates of the community college's program are younger than the required age. Therefore, regardless of the quality of the program, the graduates cannot get jobs with the state or federal government if they do not meet the age requirement. Almost none of the graduates of this program can find related work. This might lead one to evaluate the program as being of low quality.

One must also remember that the results of one follow-up study may provide insufficient evidence for planning or improving programs. Even if three or four follow-up studies have been conducted, other information may be necessary.

Again, consider a relevant example: Over a three-year period, the proportion of graduates of a particular program who found related work has been decreasing. While the follow-up information can suggest some causes of the problem, it cannot address such possible reasons as the following:

1. The demand for graduates with the skills provided by the program is decreasing.

2. Other educational agencies are preparing students with these skills at an increasing rate and are therefore causing an oversupply of job applicants.

3. The skill requirements for the related occupations are changing and graduates trained according to the old skill requirements cannot compete for the job openings.

4. An increase in unemployment is causing a temporary decrease in demand.

5. The quality of the program is deteriorating.

6. A combination of the first five phenomena is occurring.

Thus, there are many possible causes, and to blame one is to ignore all other possibilities. In the example above, an analysis of market conditions, competing educational agencies, and skill requirements must be made before a cause can be determined.

Follow-up information can be a primary indicator in determining whether program planning, improvement, or change is necessary, but it can supply answers only on <u>what</u> happened--not on <u>why</u>. To determine causal factors, such other information as labor market factors, data on competing institutions, occupational skill requirements, and program content must be examined.

## Using Follow-up Information for Improving Services

Former vocational students' responses to questions related to services provided by an educational agency can be of value in determining a need for improvement and development. For example, a guidance staff, through analyzing the reasons given by graduates for not finding related work, could discover a need for group counseling and/or improved job placement services. If a large portion of graduates indicated that they learned after leaving the program that the field offered little opportunity for advancement, the staff could take steps to remedy the situation by having ninth or tenth graders take a short seminar on occupational mobility and career paths. If some graduates indicated they discovered on the job that they did not like the pay or the working conditions, the staff could plan tours of local factories and companies and provide information on prevailing wages for occupations in the area.

Sometimes the results of follow-up studies can indicate the need for services not presently provided. For example, in responding to the question, "How did you get your first full-time job after graduation?" only a small proportion of former students might have indicated instructors, other school or college personnel, or the state employment agency as sources of job leads. The graduates might also have said that it took them three to five months to get jobs. This information makes it apparent that the educational agency should consider supporting a job placement service.

Often the results of a follow-up study indicate that a proportion of the graduates moved out of the area to find work. An educational agency finding a large percentage of its graduates leaving the area after graduation should consider developing a special task force to take several steps:

1. Develop a placement service to help former students find suitable employment both within and outside the immediate area.

2. Determine if there is a low local labor demand. If this is the case, then programs should be revised to reflect the area's occupational opportunities. If this is not the case, then programs should be revised to reflect more closely the knowledge and skills required in the community.

3. Establish periodic meetings with students and their parents to acquaint them with information on local labor market conditions. If these are poor, students and parents should be advised to consider the need to work in another labor market area after the students leave school.

Follow-up results can have value as indicators of needed services not presently provided or as indicators of a need to expand existing services. Since the development or improvement of student services can often be initiated without any additional personnel or cost, decisions related to such services can often be readily implemented. Following the indications of follow-up studies in this area can have the added advantage of making the students and parents aware that the educational agency is making concerted efforts to provide for the total needs of the students.

## Other Uses of Follow-up Information

Generally, the primary users of a follow-up report are the local educational agency and the community. Other users of this information are:

1. Local advisory council
2. State advisory council
3. State Department of Education
4. U.S. Office of Education

Each of these agencies has a different interest in and use for the follow-up report. Each exerts a different kind of influence on the decisions a local educational agency may make.

A local advisory council is concerned primarily with what the follow-up results may mean in terms of specific program or course content. The unique contribution such a group can make stems from their knowledge of industry's requirement for specific skills. For example, the council can help to determine whether changing skill requirements are causing fewer former students to find work related to their training. Local advisory councils can also be helpful in determining the accuracy of conclusions related to program offerings and in reinforcing recommendations related to programs.

The state advisory council, by contrast, is concerned with broad policy matters related to the effectiveness of programs. A local follow-up is seen by this group as an accounting of the effectiveness of local programs in meeting both the needs of students and the intent of federal legislation. While the state advisory council cannot determine policy, it does send policy recommendations directly to the State Board of Educaton. The council's most common recommendations based on local follow-up studies relate to:

1. Approving new programs

2. Evaluating existing programs in terms of:

   a. labor market needs
   b. student needs

3. Long-range planning

4. Eliminating sex or race bias in programs

5. Coordinating programs between different educational levels

6. Inservice training of instructors on new occupational skill requirements

The State Department of Education is the administrator of the regulations established by the State Board of Education. Its authority is derived from the State Board. The State Department recommends new policy, recommends changes in existing policy, and implements policy. Local follow-up results can be used by the State Department of Education to:

1. Validate its sample follow-up of former vocational students

2. Aid in determining the effectiveness of local programs

3. Develop criteria for future funding from either federal or state monies

4. Recommend new policy and policy changes to the State Board of Education

The U.S. Office of Education, as the administrator of federal legislation, develops regulations and conducts audits regarding the use of federal monies at state and local levels. The U.S. Office can use local follow-ups to assist in determining (1) how adequately federal monies were used at the state and local levels in carrying out the intent of the law and (2) what amount of federal funding should be allocated to these levels in the future. Thus, the results of follow-up are a key factor in the assessment, at the federal level, of the success of vocational education. Obviously, State and local educational agencies must be concerned about the results of follow-ups if they do not wish to jeopardize federal support of vocational education at their levels.

In summary, it is clear that follow-up studies and the data they generate are of interest to a wide audience. Figure 6-2 identifies institutions at various levels that can use follow-up information, basic ways in which they might use that information, and methods commonly used to gather that information. Figure 6-3 suggests some helpful hints for presenting the information to all the audiences who might profit form it.

## Figure: 6.2 Utilization of Follow-Up Information

| INSTITUTION | BASIC USES OF DATA | DATA GATHERING METHODS |
|---|---|---|
| U. S. Office of Education | 1. Broad planning and coordinating<br>2. Establishing accountability<br>3. Data base for federal laws and regulations<br>4. Measurement and effect of policies and laws | 1. Mailed instrumentation with guidelines<br>2. Mail surveys and questionnaires<br>3. Special meetings |
| State Departments of Education | 1. State and federal accountability requirements<br>2. State plans<br>3. Broad programmatic and curricular revisions<br>4. Support of State MIS Systems | 1. Mail surveys and questionnaires<br>2. Interviews<br>3. In-service workshops<br>4. Special meetings |
| State Advisory Committees | 1. Inquiries into state policies and procedures<br>2. Data base for recommendations<br>3. Evaluating state policies, procedures and problems | 1. Special meetings<br>2. Interviews |
| Higher Education | 1. Planning and decision making<br>2. Improving programs and services<br>3. Local, state and federal accountability requirements<br>4. Support for MIS systems | 1. Mail surveys and questionnaires<br>2. Interviews<br>3. Telephone surveys<br>4. In-service workshops<br>5. Special meetings |
| School Districts | 1. Local, state and federal accountability requirements<br>2. Improving programs and services<br>3. Planning and decision making<br>4. Evaluating district plans, policies and procedures | 1. Mail surveys and questionnaires<br>2. Interviews<br>3. Telephone surveys<br>4. In-service workshops<br>5. Special meetings |
| LEAs | 1. Improving programs and services<br>2. Planning and decision-making<br>3. Evaluating individual conditions, programs policies, etc.<br>4. Local, state and federal accountability requirements | 1. Mail surveys and questionnaires<br>2. Interviews<br>3. Telephone surveys<br>4. In-service workshops<br>5. Special meetings |
| Local Advisory and Craft Committees | 1. Planning and decision making<br>2. Data for recommendations<br>3. Evaluating local programs, policies, procedures, etc. | 1. Special meetings<br>2. Interviews<br>3. Telephone surveys |
| Other Educational Groups | 1. Planning and decision making<br>2. Evaluating programs, policies and procedures<br>3. Improving conditions, situations, etc. | 1. Mail surveys and questionnaires<br>2. Interviews<br>3. Telephone surveys<br>4. Special meetings |

**Figure 6-3**

**Factors to Consider When Presenting Follow-up Information**

1. Present data to as many appropriate groups and individuals as possible, and highlight critical data on special populations.

2. Go through the proper chain of command when presenting data to a school board or board of trustees, superintendent or president, administrators, etc.

3. Present the information to the appropriate administrator in a school or college. Remember that, although many follow-up reports are prepared for boards of education, most utilization of the information occurs at the school or program level.

4. Talk directly to teachers, where applicable. When data indicate a problem, many times it can be solved by going directly to the heart of the problem (teacher, principal, program manager).

5. When making oral presentations, cover areas most important to the audience and discuss them as thoroughly as necessary.

6. Send an accompanying form with follow-up reports to be filled in by the recipient of the report showing who used the data for what, how, etc. This is an excellent way to identify who is using the data.

7. Make use of the public media. A considerable amount of public relations is involved with the presentation phase of the follow-up process.

8. Since reports involve data comparisons, have state, district, and institutional data available for some presentations. Make sure that copies are available for everyone, if possible. Avoid school-to-school comparisons.

9. When presenting information to a board of education, report only the aspects that are of immediate interest. Do not include follow-up information not related to board policies.

10. Remember that follow-up data are relevant to individuals in many agencies: Chambers of Commerce, State Employment Services, and Comprehensive Employment and Training Act prime sponsors.

# SECTION 7

# GLOSSARY

## GLOSSARY*

Some of the key terms used in the follow-up study elude clear and precise definition. Those definitions that follow are intended to clarify the overall focus on the follow-up study but go beyond the definitions needed in doing a follow-up study. Moreover, they are identified as a "definitional base" for the comprehensive evaluation of vocational education, of which follow-up studies are an integral part. They are not "carved in stone" and should not be interpreted so as to foreclose alternative, potentially valuable definitions.

However, the definitions that follow pertain to all sections of the Educational Amendments of 1976, Title II, Vocational Education. They were taken from "the Act" itself (in particular Part C - Definitions) and Appendix A -- Definitions as they appeared in the Rules and Regulations, Federal Register, Vol. 42, No. 191 - Monday, October 3, 1977.

Categorical definitions of handicapped were taken from the Rules and Regulations that implement Part B of the Education of the Handicapped Act (as required by the Education for All Handicapped Children Act of 1975) Federal Register, Vol. 42, No. 136 - Tuesday, August 23, 1977. Other definitions were taken from the Vocational Education Data System (VEDS) that has become the review version being examined in the Office of Education (OE) and by the Office of Management and Budget (OMB). Therefore, the definitions that follow are not necessarily final.

Definitions related to corrections, such as those for offender and youth offender, were taken from the following source: Search Group, Inc., U. S. Department of Justice, Law Enforcement Assistance Administration, National Criminal Justice Information and Statistics Service, Dictionary of Criminal Justice Data Terminology. First Edition, 1976, pp. 66,97.

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* Source: Marion Franken, "Providing Technical Evaluation Services for Educational Agencies," mimeographed (Columbus, Ohio: The National Center for Research in Vocational Education, The Ohio State University, 1978), pp. 15-27.

Act: The Vocational Education Act of 1963, Public Law 88-210, as amended by Title II of the Education Amendments of 1976, Public Law 94-482, 90 Stat. 2168, 20 U.S.C. 2301 et seq.

Administration: Activities of a state or an eligible recipient necessary for the proper and efficient performance of its duties under the Act, including supervision but not including ancillary services.

Adult as it pertains to long-term adult: A person enrolled in any program not classifiable either under eleventh- and twelfth-grade levels or as postsecondary. Persons enrolled in a program of at least 500 contact hours duration leading to new occupation preparation will be reported here. Persons registered either by the federal or state government and currently enrolled in a related course leading to journeyman status (apprentice program) will also be reported here.

Adults as it pertains to short-term adult: A person enrolled in any program of less than 500 contact hours.

Adult program: A vocational education program for persons who have already entered the labor market or who are unemployed or who have completed or left high school and who are not described in the definition of "postsecondary program."

American Indian or Native Alaskan: A person having origins in any of the original peoples of North America or maintaining cultural identification through tribal affiliation or community recognition.

Ancillary services: Activities which contribute to the enhancement of quality in vocational education programs, including activities such as teacher training and curriculum development but excluding administration (except in consumer and homemaking education under Section 150 of the Act).

Area vocational education school: (a) A specialized high school used exclusively or principally for the provision of vocational education to persons who are available for study in preparation for entering the labor market; or (b) the department of a high school exclusively or principally used to provide vocational education in no less than five different occupational fields to persons who are available for study in preparation for entering the labor market; or (c) a technical or vocational school used exclusively or principally for the provision of vocational education to persons who have completed or left high school and who are available for study in preparation for entering the labor market; or (d) the department or division of a junior college or community college or university operating under the

policies of the State Board which provides vocational education in no less than five different occupational fields, leading to immediate employment but not necessarily leading to a baccalaureate degree, if: (1) The vocational programs are available to all residents of the state designated and approved by the State Board; and (2) In the case of a school, department, or division described in (c) or (d), it admits as regular students both persons who have completed high school and persons who have left high school.

Asian or Pacific Islander: A person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or Pacific Islands. This area includes, for example, China, Japan, Korea, the Philippine Islands, Samoa, India, and Vietnam.

Bilingual vocational training: Training or retraining in which instruction is presented in both the English language and the dominant language of the persons receiving training and which is conducted as part of a program designed to prepare individuals of limited English-speaking ability for gainful employment as semi-skilled or skilled workers or technicians or subprofessionals in recognized occupations and in new and emerging occupations, but excluding any program to prepare individuals for employment in occupations which require a baccalaureate or advanced degree; bilingual vocational training includes guidance and counseling (either individually or through group instruction) in connection with such training or for the purpose of facilitating occupational choices; instruction related to the occupation or occupations for which the students are in training or instruction necessary for students to benefit from such training; the training of persons engaged as, or preparing to become, instructors in a bilingual vocational training program; and the acquisition, maintenance, and repair of instructional supplies, aids, and equipment, but such term does not include the construction, acquisition or initial equipment of buildings or the acquisition or rental of land.

Black, not of Hispanic Origin: A person having origins in any of the black racial groups of Africa.

CETA: The Comprehensive Employment and Training Act of 1973, Public Law 93-23, 87 Stat. 839, as amended.

Completed program: A student who finished a planned sequence of courses, services or activities designed to meet a vocational occupational objective and which purports to teach entry-level job skills. Includes only those persons in secondary, postsecondary, and long-term adult programs. Report these persons unduplicated by race/ethnic group by sex, level, and handicap as previously defined. (Federal Regulations, October 3, 1977, Part VI).

Consumer and homemaking education programs: Programs that consist of instructional programs, services, and activities that at all educational levels for the occupations of homemaking including: (1) comprehensive homemaking; (2) child development and guidance; (3) clothing and textiles; (4) consumer education; (5) family health; (6) family living and parenthood education; (7) food and nutrition; (8) home management; (9) housing and home furnishings; and (10) other.

Cooperative education (unduplicated): A program of vocational education for persons who, by written cooperative arrangements between school and employers, receive instruction, including required academic courses and related vocational instructions by alternating study in school with a job in any occupational field. These two experiences must be planned and supervised by the school and employers so that each contributes to the person's education and his or her employability. Work periods and school attendance may be on alternate half days, full days, weeks, or other periods of time in fulfilling the cooperative program.

Curriculum materials: Materials: (a) covering instruction in a course or series of courses in any occupational field, and (b) designed either to prepare persons for employment at the entry level, or (c) to upgrade occupational competencies of those previously or presently employed in any occupational field.

Disadvantaged: Persons (other than handicapped) who meet the following criteria:

Economic disadvantaged: (1) Family income is at or below national poverty level; (2) Participant or parent(s) or guardian of the participant is unemployed; (3) Participant or parent of participant is institutionalized or under state guardianship. Operationally, economic disadvantage can be determined by reporting students at the secondary level who are participating in a free or reduced AFDC (Aid to Families of Dependent Children) lunch program, or work-study program, and students at the postsecondary or long-term adult levels may be identified from basic education opportunity grants records or similar financial aid.

Academic disadvantaged: Indicated by: (1) lack of reading and writing skills; (2) lack of mathematical skills; or (3) performance below grade level. Operationally, academic disadvantage can be determined at the secondary level by reporting students enrolled in remedial programs, or performing below grade level on standardized tests or failing a grade and for the postsecondary and long-term adult levels by reporting students enrolled in remedial instruction or an academic probation. Substantive evidence of disadvantage must be kept on file.

Displaced homemaker: Persons who meet the following definitions: (a) persons who had been homemakers but who now, because of dissolution of marriage, must seek employment; (b) persons who are single heads of households and who lack adequate job skills; (c) persons who are currently homemakers and part-time workers but who wish to secure full-time jobs; and (d) women who are now in jobs which have been traditionally considered jobs for females and who wish to seek employment in job areas which have not been traditionally considered as job areas for females, and men who are now in jobs which have been traditionally considered jobs for males and who wish to seek employment in job areas which have not been traditionally considered as job areas for males.

Eligible recipient: (a) a local educational agency, or a postsecondary educational institution.

Enrollment of handicapped by type of instructional setting: To be reported only once, by instructional setting of program in which enrolled. Instructional setting of program should be indicated as either regular, mixed, separate program, separate facility, or other.

Regular program: One which is conducted in an integrated setting, i.e., with handicapped and nonhandicapped students together. A handicapped student should be reported in a regular program if that student experiences full participation in a regular vocational education program. If added support services are provided to assist a student, he/she should be reported under the regular programs provided those services are in addition to full participation in the regular program.

Mixed program: A program in which handicapped students participate in both regular and separate instructional settings. The handicapped person participates part-time in the regular instructional setting.

Separate program: A program in which the handicapped person is enrolled at a regular institution in a vocational education program that is designed for and limited to handicapped students.

Separate facility: A facility in which the handicapped student is enrolled full-time in a vocational education program that is designed for and limited to handicapped students.

Other: Vocational education program activities provided to handicapped students in hospitals or at the homes of the students.

Gifted and talented: Children identified by professional qualified persons, who by virtue of outstanding abilities are capable of high performance. These are children who require differentiated educational programs and/or services beyond those normally provided by the regular school program in order to realize their contribution to self and society. "High performance" might be manifested in any or a combination of these areas: (1) general intelligence; (2) creative or productive thinking; (3) leadership ability; (4) visual and performing arts; and (5) psychomotor ability.

Handicapped children: (a) As used in the part, "handicapped children" means those children evaluated in accordance with subsections 121a.530 - 121a.534 as being mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, other health impaired, deaf-blind, multi-handicapped, or as having specific learning disabilities, who because of those impairments need special education and related services. For VEDS reporting purposes at the secondary level, report all handicapped persons enrolled in vocational education programs who have an Individualized Education Plan (IEP) as prescribed under Public Law 94-142. For reporting purposes for postsecondary and long-term adult vocational education programs, a handicapped person is a person who has a physical or mental impairment. Substantive evidence of handicapping condition must be on file either from medical records or, where appropriate, by psychological (and/or physiological) diagnosis. (b) The terms used in this definition are defined as follows:

1. Deaf: A hearing impairment which is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification, which adversely affects educational performance.

2. Deaf-blind: Concomitant hearing and visual impairments, the combination of which causes such severe communications and other developmental and educational problems that they cannot be accommodated in special education programs solely for deaf or blind children.

3. Hard of hearing: A hearing impairment, whether permanent or fluctuating, which adversely affects a child's educational performance but which is not included under the definitions of "deaf" in this section.

4. Mentally retarded: Significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period, which adversely affects a child's educational performance.

5. Multi-handicapped: Concomitant impairments (such as mentally retarded-blind, mentally retarded-orthopedically impaired, etc.), the combination of which causes such severe educational problems that they cannot be accommodated in special education programs solely for one of the impairments. The term does not include deaf-blind children.

6. Orthopedically impaired: A severe orthopedic impairment which adversely affects a child's education performance. The term includes impairments caused by congenital anomaly (e.g., clubfoot, absence of some member, etc.), impairments caused by disease (e.g., poliomyelitis, bone tuberculosis, etc.), and impairments from other causes (e.g., cerebral palsy, amputations, and fractures or burns which cause contractures).

7. Other health impaired: Limited strength, vitality or alertness, due to chronic or acute health problems, such as a heart condition, tuberculosis, rheumatic fever, nephritis, asthma, sickle cell anemia, hemophilia, epilepsy, lead poisoning, leukemia, or diabetes, which adversely affects a child's educational performance.

8. Seriously emotionally disturbed: A condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree, which adversely affects educational performance: (A) An inability to learn which cannot be explained by intellectual, sensory, or health factors; (B) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers; (C) Inappropriate types of behavior or feelings under normal circumstances; (D) A general pervasive mood of unhappiness of depression; or (E) A tendency to develop physical systems or fears associated with personal or school problems. (ii) The term includes children who are schizophrenic or autistic. The term does not include children who are socially maladjusted, unless it is determined that they are seriously emotionally disturbed.

9. Specific learning disability: A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain disfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, or of environmental, cultural, or economic disadvantage.

10. Speech impaired: A communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, which adversely affects a child's educational performance.

11. Visually handicapped: A visual impairment which, even with correction, adversely affects a child's education performance. The term includes both partially seeing and blind children.

High school program: Vocational education for persons in grades nine through twelve.

Hispanic: A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

Industrial arts education programs: Those education programs (a) which pertain to the body of related subject matter, or related courses, organized for the development of understanding about all aspects of industry and technology, including learning experiences involving activities such as experiments, designing, constructing, evaluating and using tools, machines, materials and processes; and (b) which assist individuals in making informed and meaningful occupational choices which prepare them for entry into advanced trade and industrial or technical education programs. (Section 195 (15); 20 U.S.C. 2461).

Leavers: Anyone who has been enrolled and attended a program of vocational education and has left the program or institution without completing the program, including persons who leave the program voluntarily before its formal completion because they have acquired sufficient entry-level occupational preparation to work in the field, and who have taken a job related to their field of training and, all other leavers. This count should include all persons who left a program whose status was documented during the reporting year. For example, a person who left in June 1979, but was not documented until the following September would be reported in the 1979-80 reporting cycle. Report these persons by race/ethnic group, by sex, level of completion for persons who left after completing more than 50 percent of the program, and for persons who left before completing 50 percent or less of the program, and handicapped.

Limited English-speaking ability: When used in reference to an individual means: (a) Individuals who were not born in the United States or whose native tongue is a language other than English, and (b) Individuals who came from environments where a language other than English is dominant, and by reasons thereof, have difficulties speaking and understanding instruction in the English language.

Local educational agency: (a) A board of education (or other legally constituted local school authority) having administrative control and direction of public elementary or secondary schools in a city, county, township, school district, or political subdivision of a state; or (b) Any other public educational institution or agency having administrative control and direction of a vocational educational program.

Low-income family or individual: Families or individuals who are determined to be low-income according to the latest available data from the Department of Commerce.

Occupational preparation programs: Programs designed to impact competencies to persons to prepare them for employment (paid or unpaid) in a specific occupational field.

Offender: An adult who has been convicted of a criminal offense. Defining features include: (1) identified adult, (2) charged with a crime by a criminal justice agency, (3) convicted.

Other occupational programs: (to be reported by two-digit OE code) Enrollments in a program or activity below the eleventh grade level, courses prerequisite to a six-digit OE code program or a course or activity that leads to more than one six-digit program.

Postsecondary students: Persons enrolled in vocational education programs to whom credit is given toward an Associate Degree. Persons who are pursuing a certificate or license rather than an Associate Degree even though they may be concurrently receiving credit toward an Associate Degree shall be classified adults.

Postsecondary educational institution: A nonprofit institution legally authorized by a state to provide education for persons sixteen years of age or older who have graduated from or left elementary or secondary school.

Postsecondary program: Vocational education for persons who have completed or left high school and who are enrolled in organized programs of study for which credit is given toward an associate or other degree, but which programs are not designed as baccalaureate or higher degree programs.

Private vocational training institution: A business or trade school, or technical institution or other technical or vocational school, in any state, which (a) admits as regular students only persons who have completed or left elementary or secondary school and who have the ability to benefit from the training offered by such institution; (b) is legally authorized to provide, and provides within that state, a program of postsecondary vocational or technical education designed to fit individuals for useful employment in recognized occupations; (c) has been in existence for two years or has been specially accredited by the Commissioner as an institution meeting the other requirements of this subsection; and (d) is accredited (1) by a nationally recognized accrediting agency or association listed by the Commissioner pursuant to this clause, or (2) if the Commissioner determines that there is no nationally recognized accrediting agency or association qualified to accredit schools of a particular category, or (3) if the Commissioner determines that there is no nationally recognized or state agency or association an Advisory Committee appointed by him/her and composed of persons specially qualified to evaluate training provided by schools of that category, which committee shall prescribe the standards of content, scope, and quality which must be met by those schools and shall also determine whether particular schools meet those standards. For the purpose of this paragraph, the Commissioner shall publish a list of nationally recognized accrediting agencies or associations and state agencies which he/she determines to be reliable authority as to the quality of education or training afforded.

Program: A planned sequence of courses, services, or other educational activities, eleventh grade and above, designed to meet a specific vocational objective(s).

Program completer: A student who finished a planned sequence of courses, services, or activities which purports to teach entry-level job skills designed to meet an occupational objective.

Program enrollment: Enrollment will be counted upon official entrance into an eleventh grade level vocational education program for which a vocational objective can be stated or implied.

Related services: Includes transportation and such developmental, corrective and other supportive services as are required to assist a handicapped person to benefit from the vocational education program; such services include speech pathology and audiology, psychological services, physical and occupational therapy, recreation, counseling services, and medical services for diagnostic or evaluation purposes.

School facilities: (a) Classrooms and related facilities (including initial equipment and interests in lands on which such facilities are constructed). (b) "School facilities" does not include any facility intended primarily for events for which admission is to be charged to the general public.

Secondary program: Vocational education for persons in secondary grades as defined by state law.

Sex bias: Behaviors resulting from the assumption that one sex is superior to the other.

Sex discrimination: Any action which limits or denies a person or a group of persons opportunities, privileges, roles, or rewards on the basis of their sex.

Sex stereotyping: Attributing behaviors, abilities, interests, values and roles to a person or group of persons on the basis of their sex.

Short-term adult enrollments: Enrollments in adult vocational education for programs of less than 500 contact hours duration.

Special educational assistance: Specially designed instruction and aids to meet the individual needs of a handicapped student; such aids may include teachers' aides to support classroom or lab instruction, taped texts, interpreters or other effective methods of making orally delivered materials available to students with hearing impairments, readers in libraries for students with visual impairments, classroom equipment adapted for use by students with manual impairments, and other similar services and actions, as well as, facility modifications.

Special needs: Persons who meet the requirements under the law for one of the categories (handicapped, of limited English-speaking ability, disadvantaged [economic and academic]) whether or not special services are provided by vocational education per se.

Special needs (unduplicated): Enrollment counts of persons who are handicapped, of limited English-speaking ability or disadvantaged (economic or academic), regardless of whether or not special services are being provided by vocational education per se. A person must be listed under only one type of special needs category. When a person enrolled has more than one special need, they are to be reported unduplicated in this order: handicapped, of limited English-speaking ability, disadvantaged (economic or academic).

State: Includes: (a) The fifty states; (b) The District of Columbia; (c) The Commonwealth of Puerto Rico; (d) The Virgin Islands; (e) Guam; (f) American Samoa; and (g) The Trust Territory of the Pacific Islands.

State board: The state board designated or created by state law as the sole state agency responsible for: (a) the administration of vocational education; or (b) supervision of the administration of vocational education in the state.

State educational agency (SEA): (a) The state board of education; or (b) Other agency or office primarily responsible for the state supervision of public elementary and secondary schools; or (c) If there is no such office or agency, an office or agency designated by the Governor or by state law.

Support services for women:

Counseling: Counseling women entering and enrolled in nontraditional programs on the nature of these programs and on the ways of overcoming the difficulties which may be encountered by women in these programs.

Job development: Programs and activities in the area of job development include the provision of materials and information concerning the world of work which present women students entering, enrolled in, or interested in nontraditional programs, the options, opportunities, and range of jobs available in these nontraditional fields. Job development support services may also be carried out through bringing persons employed in these nontraditional fields into the schools, as well as providing opportunities for women students to visit the workplace of business and industry so as to afford them a clear understanding of the nature of the work, including an understanding of the work setting in which these jobs are performed.

Job follow-up support: Services to assist women students in finding employment relevant to their training and interests. Follow-up services may be provided to assist students in the work force and to deal with barriers which women face in working in nontraditional areas.

Training of women instructors: Funds may be used to increase the number of women instructors involved in the training of individuals in programs which have traditionally enrolled mostly males, so as to provide supportive examples for these women who are preparing for jobs in nontraditional areas of employment.

Terminations (unduplicated): "Completed Program" means a student who finished a planned sequence of courses, services, or activities designed to meet a vocational occupational objective and which purports to teach entry-level job skills. Include only those persons in secondary, post-secondary and long-term adult programs. Report these persons unduplicated by race/ethnic group by sex, level, and handicap, as previously defined. (Federal Regulations, October 3, 1977, Part VI).

Transfers: Persons who left vocational education programs to enroll (a) in other vocational education programs or (b) in programs not related to vocational education. A count of transfers should include all persons whose transfer status was documented during the reporting year. For example, a person who transferred in June 1979 whose transfer was not documented until the following September would be counted in the 1979-80 reporting cycle.

Vocational education: Organized educational programs which are directly related to the preparation of individuals for paid or unpaid employment or for additional preparation for a career requiring other than a baccalaureate or advanced degree. For purposes of this paragraph, the term "organized education program" means only: (a) instruction related to the occupation or occupations for which the students are in training or instruction necessary for students to benefit from such training and (b) the acquisition, maintenance, and repair of instructional supplies, teaching aids, and equipment. The term "vocational education" does not mean the construction, acquisition, or initial purchase of equipment for buildings or the acquisition or rental of land.

Vocational instruction: Instruction which is designed to prepare individuals upon its completion for employment in a specific occupation or cluster of closely related occupations in an occupational field, and which is especially and particularly suited to the needs of those engaged in or preparing to engage in such occupation or occupations. Such instruction may include: (a) Classroom instruction; (b) Classroom related field, shop, and laboratory work; (c) Programs providing occupational work experiences, including cooperative education and related instructional aspects of apprenticeship programs; (d) Remedial programs which are designed to enable individuals to profit from instruction related to the occupation or occupations for which they are being trained by correcting whatever educational deficiencies or handicaps prevent them from benefiting from such instruction; and (e) Activities of vocational student organizations which are an integral part of the vocational instruction, subject to the provisions in 104.513.

Vocational objective: The intended occupational outcome of training and other preparation as stated by the individual student or implied. The vocational objective usually is stated in terms of specific job titles.

White, not of Hispanic origin: A person having origins in any of the original peoples of Europe, North Africa, or the Middle East.

Youthful offender: A person, adjudicated in criminal court, who may be above the statutory age limit for juveniles but is below a specified upper age limit, for whom special correctional commitments and special record sealing procedures are made available by statute. Defining features include: (1) person adjudicated in criminal court; (2) judicial proceedings began in criminal or juvenile court; (3) defined a youthful offender in accord with a statute stating age limits, and; (4) providing special correctional commitments and/or record sealing procedures.

# SECTION 8

# ANNOTATED BIBLIOGRAPHY

## INTRODUCTION

This annotated bibliography identifies selected documents that may be useful to you as you design and implement a follow-up system for special populations.

The abstracts have been organized into four sections:

- Limited English Speaking and Bilingual
- Women
- Disadvantaged and Minorities
- Handicapped
- Miscellaneous

These documents were identified from a computer search of Abstracts of Instructional Materials (AIM)/Abstracts of Research Materials (ARM), Psychological Abstracts, Sociological Abstracts, dissertations, and Educational Resources Information Center (ERIC). In addition, periodicals and special publications from the holdings of the Research Library at The National Center for Research in Vocational Education were included.

### The Abstracts

Each abstract contains a brief summary of the resource. ERIC Document numbers are provided for selected documents. It is also important to note that any abstract coded by a single asterisk was adapted from the abstract in the ERIC system while any abstract coded by a double asterisk (**) was obtained from Harrington, Lois, et al. Competency-Based Staff Development: A Guide to the Implementation of Programs for Post-Secondary Occupational Personnel (Columbus, Ohio: The National Center for Research in Vocational Education, 1978, Workshop Edition).

ANNOTATED BIBLIOGRAPHY

## Limited English-Speaking and Bilingual Students

Berry, Dale W., et al. Assessment of the Status of Bilingual Vocational Training for Adults. Volume I: Assessment Report. Albuquerque, New Mexico: Kirschner Associates, Inc., 1976. (ED 131 681)*

This portion of the three-volume report outlines the need for bilingual vocational training (BVT), the legislative and programmatic responses to the need, and conclusions drawn from the assessment of BVT programs. The appendices contain a detailed discussion of procedures used for collecting data; the questionnaire administered to State Department of Education officials for compiling the program inventory; the program inventory, with detailed descriptions of BVT programs and mention of other related programs; and a chart summarizing, state-by-state, the program inventory and pertinent program characteristics.

Law, Alexander I. Evaluating Bilingual Programs. TM Report 61. Princeton, New Jersey. ERIC Clearinghouse on Tests, Measurement, and Evaluation, 1977. (ED 138 645)*

This paper is directed to those who are undertaking evaluation of a bilingual program for the first time or who have already struggled with the mysteries of such an undertaking. Emphasis is given to the reporting requirements of the various federal and state funding agencies. The bilingual-bicultural program structure is defined so the evaluator can see the interplay of program prototypes, student language facility, and instructional approach. The evaluation process is divided into an explication of evaluation models, evaluation design, and instrumentation. Examples of each of these process components are given.

## Women

Lehmann, Phyllis. "Cutting Sex Bias Out of Vocational Education," The Education Digest. XLII: 33-35.

This article identifies efforts to reduce sex bias in several vocational education programs. The major programs reported include: The New Pioneers Project to Eliminate Sex Bias in Occupational Education (North Carolina), which is trying to change attitudes among state vocational education staffees, guidance counselors, and students; the introduction to vocational training areas for ninth graders at Eli Whitney Vocational High School (Brooklyn, New York); and Project EVE (Texas), which is designed to inform young women of the full range of job opportunities available and to recruit them for nontraditional programs.

Rieder, Corinne H. Women, Work, and Vocational Education. Occasional Paper No. 26. Columbus: The Center for Vocational Education, 1977.

This paper discusses past and future trends in occupational segregation of women in the labor force. The trend toward occupational segregation is supported by labor market information. The latter portion of the paper concentrates on educational segregation by sex in vocational education and provides suggestions to vocational educators for altering these trends.

Roby, Pamela Ann. Vocational Education and Women, Santa Cruz, California: University of California, 1975. (ED 112 155)

This study focuses upon the role of women in vocational education, women's vocational education needs and the law, and barriers to women in vocational education (e.g., admission, enrollment, instruction and counseling). The final chapter provides a summary. The study's findings and recommendations for changes are applicable to federal laws, federal and state policies and practices, local educational policies and practices, and research and development efforts. The paper contains 83 footnotes which may introduce the reader to other resources in this area.

Steele, Marilyn. Women in Vocational Education, Project Baseline Supplemental Report. Flagstaff, Arizona: Northern Arizona University, 1974.

This Project Baseline Supplemental Report presents statistical data on the status of women in the world of work and the status of vocational-technical education for females. It also reports on sexism in society and education, staff-related problems for women in education and affirmative action for women in education and employment (including an overview of pertinent legislative and executive actions). The last section contains the implications for change in vocational-technical education.

## Disadvantaged and Minorities

Lockette, Rutherford E. and Lawrence F. Davenport. Review and Synthesis of Research on Vocational Education for the Urban Disadvantaged. Information Series No. 50, VT 013761. Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University, 1971.

The publication identifies substantive problems and methodological approaches for persons concerned with this important topic. It provides a review of research findings which have application to educational programs. The specific contents include: (1) a historical perspective of vocational education for the disadvantaged, (2) a rationale for programs and characteristics of the disadvantaged, (3) research on vocational education programs for the disadvantaged, (4) evaluation and discussion of the research effort related to the disadvantaged, and (5) important considerations in developing and operating vocational education programs for the disadvantaged.

Oakland, Thomas, ed. Psychological and Educational Assessment of Minority Children. New York: Brunner/Mazel, Inc., 1977.

This book identifies various practices and issues which should be considered in developing and providing diagnostic services with minority group children. The book is organized to describe practices and issues from four dimensions: historical precedents, current standards set forth by professional associations, legislative judicial action, available technology, and ways to conceptualize a service delivery model (using seven authors). In addition, there are eight appendices which include, for example, ethical standards for psychologists; selected portions from standards for educational and psychological tests; and an annotated bibliography of language dominance measures.

Oaklief, Charles. Review and Synthesis of Research on Vocational and Technical Education for the Rural Disadvantaged. Information Series No. 44, VT 013761. Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University, 1971.

The publication is an authoritative analysis of the literature in the field of vocational and technical education for the rural disadvantaged. The contents focus on (1) the identification and description of the rural disadvantaged highlighting the demographic factors, ecological and economic factors, and family and social factors; (2) a rationale and provisions for vocational and technical education; (3) accessibility of vocational and technical training; (4) innovative and exemplary programs; (5) trends in vocational and technical education; and (6) provisions to overcome special problems.

U.S. Department of Labor. Workers of Spanish Origin: A Chartbook, Bulletin 1970. Washington, D.C.: Government Printing Office, 1978.

The content of this chartbook identifies selected characteristics of the Spanish-American population and labor force. The focus is on two groups of Spanish origin: Mexican Americans and Puerto Ricans. The data and information include: (1) size and composition of the labor force and labor force participation rates, (2) characteristics of the unemployed and their unemployment rates, (3) work experience in 1975 (weeks worked, definition of full or part-time employment and incidence of unemployment) and yearly earnings, and (4) data on family income and on poverty.

## Handicapped

Fisher, Steven D., et al. Post Secondary Programs for the Deaf: II. External View. Research Report No. 61. Minneapolis, Minnesota: University of Minnesota, Research, Development, and Demonstration Center in Education of Handicapped Children, 1974. (ED 106 999)*

The second of six monographs on three postsecondary vocational technical programs for deaf students reports evaluations gleaned from deaf former students presently employed, their immediate supervisors, parents, and vocational rehabilitation counselors. Methods and procedures used in interviews and questionnaires are explained. Data were collected from students concerning their vital statistics, job satisfaction, economic and employment status, aspirations, and views of the training and program. Information reported from interviews with immediate supervisors focuses on current occupational status of the employee, training, communications between supervisor and employee, employee productivity, the attitude of the supervisor, and the size and nature of the company. Replies from vocational rehabilitation counselors discuss referral procedures, training, and client communication. Also examined are data from parents on the occupational status of their son/daughter, their vocational or technical training, and their reactions to training. The report discusses interview and questionnaire responses and draws conclusions from the data collected. The appendices contain the interview and questionnaire forms.

Hull, Marc E. Vocational Education for the Handicapped: A Review, Information Series #119. Columbus, Ohio: The Center for Vocational Education, The ERIC Clearinghouse on Career Education, 1977.

This document is a review and synthesis of programming and techniques useful for providing vocational education to the handicapped secondary and postsecondary school student. Specifically, the review includes sections such as: rationale for the participation of the handicapped in vocational education, barriers to participation of the handicapped, the impact of legislation on the handicapped, identifying the handicapped, developing alternative programs to serve the handicapped, and prevocational education for the handicapped, evaluation of students and programs. There is also a section on recommendations for the future. Three appendices are included providing materials on (1) information systems on the handicapped, (2) bibliographies of resource materials for the handicapped, and (3) resources for materials for preservice and inservice personnel.

McKinnon, Rachel, et al. A Follow-up Study of Graduates from a Vocational Rehabilitation Program in a Residential Training Center for the Mentally Retarded. Sacramento, California: California State Department of Rehabilitation, 1970. (ED 046 149)*

A follow-up study of graduates from a vocational rehabilitation program, in a residential training center for the mentally handicapped, was reported in this study. Characteristics of the students, economic benefits, changes in level of functioning, need for additional services, student attitudes toward the in-hospital program, and parental attitudes toward the rehabilitation program were reviewed. The information was obtained through interview questionnaires mailed to students, employees and students' families.

Pati, Gopal C. "Countdown on Hiring the Handicapped." Personnel Journal, March 1978, Volume 57, No. 3, 144-153.

This article discusses the lack of progress in implementing the provisions of the Vocational Rehabilitation Act requiring federal contracts and subcontracts to take affirmative action to seek out qualified handicapped people and utilize them. It identifies eight major studies that focused upon the handicapped employee and presents four short case studies relating reasons why companies employ the handicapped. In addition, the issues of reasonable accommodation and supervision of the handicapped are raised (including a taxonomy of motivational needs and approaches involving handicapped people).

Nathanson, Robert B. "The Disabled Employee: Separating Myth from Fact." The Harvard Business Review, May-June 1977, 6-8.

This article discusses five myths surrounding the employment of handicapped persons: the insurance myth, the dependability myth, the productivity myth, the accommodation myth and the double-standard myth. In dispelling each myth, the article presents findings from the DuPont and Bureau of Labor Statistics (BLS) studies. The DuPont study sampled 1,452 employees with disabilities, including orthopedic difficulties, visual impairment, heart disease, paralysis, amputation, epilepsy, hearing impairment and total deafness. The BLS study matched the performance of 11,028 severely disabled workers with that of 18,258 non-disabled workers doing the same kind of work.

## Miscellaneous

Lee, Arthur M. Learning a Living Across the Nation. Project Baseline. Vol. V, Flagstaff, Arizona: Northern Arizona University, 1976.

This document is the fifth volume in a series of annual reports on the status of vocational education in the United States. Its purpose is to report the yearly developments in vocational education, by collecting information on the numbers and characteristics of students enrolled, programs, costs, and results. The entire study, known as Project Baseline, was initiated by Congress in 1971. The report is divided into the following sections: Chapter I (Five Years of Vocational Education) and Chapter II (The Fifth Year) are based on statistical data, with conclusions and interpretations. Specifically, Chapter II provides enrollment data for handicapped, disadvantaged and female students. Chapter III (The Critical Next Step), Chapter IV (Some Observations) and Chapter V (A Look Ahead) are primarily based on descriptive data. These data are included to add substance and depth to the quantitative data. Chapter VI (Project Baseline) presents a discussion of Project Baseline's past, present and future roles.

Phelps, L. Allen, and Lutz, Ronald J. Career Exploration and Preparation for the Special Needs Learners. Boston, Massachusetts: Allyn and Bacon, Inc. 1977.

This text is designed to facilitate the expansion and improvement of secondary occupational programs serving the handicapped and disadvantaged student. Part One focuses on the basic concepts and ideas that undergird effective interdisciplinary instructional planning for special needs students. It discusses and illustrates the nature of special needs students, career exploration and preparation programming, and cooperative teaching. Part Two identifies a series of specific processes designed to aid in developing and implementing individualized instructional programs. A systematic approach to planning, implementing and evaluating instruction is used. The appendix discusses a learning record folder, a learner profile, a learner performance record, and an instructional module.

Schneck, Gerald R., Lerwick, Lowell P., and Copa, George H. Assessment of the Prevalence and Service Need Requirements of Handicapped and Disadvantaged Students in Vocational-Technical Education Programs in Minneosta. Final Report. Minneapolis, Minnesota: University of Minnesota, Minnesota R & D Center for Vocational Education, 1978.

This study is focused on a description of the present need for services by handicapped or disadvantaged persons who may want or benefit from vocational-technical education in Minnesota. Given time and financial constraints, the study was conducted using secondary data sources, i.e., knowledgeable persons were interviewed and relevant existing data were analyzed.

The report is divided into three major chapters. Chapter I identifies the purpose of and procedures used in the study. Chapter II deals with definitions and indicators of handicapped and disadvantaged persons while Chapter III identifies the prevalence of handicapped and disadvantaged persons in vocational-technical education.

Urban, Stanley J. and Thomas Tsiyi. The Special Needs Student in Vocational Education. New York: MSS Information Corporation, 1974.

Four topical areas dealing with vocational education for the special needs student is discussed by forty authors. Part I provides an overview of current issues and trends in special education. Part II examines the role of law in providing the special needs child with vocational education. Part III focuses on understanding the nature of vocational programs for the handicapped and disadvantaged. Part IV discusses career education for special needs students. The readings are aimed at raising issues that the vocational educator might consider. A list of special education instructional materials, centers and community resources for the handicapped are included in the Appendix.

Wall, J. E., ed. Vocational Education for Special Groups, Sixth Yearbook. Washington, D. C.: American Vocational Association, 1976.**

Twenty-four selected authors explore pressing issues, concepts, and strategies concerning vocational education for special groups. The book is divided into three sections. Section I deals with vocational education and special groups: an overview. Section II focuses on specific special groups, while Section III examines strategies for delivering vocational education to special groups. The last selection in Section III specifically focuses on evaluating programs for special groups.

# SECTION 9

# APPENDICES

# APPENDIX A

Follow-up Questionnaires, Employer Follow-up Form, Parent or Guardian Follow-up Form and Interview Guides

Bates, Enid Buswell and Jack M. Bullock. A Follow-up Study of Selected Women Attending West Texas State University from Fall, 1973, through Spring, 1976. Final Report. Washington, D. C.: American Association of University Women. 1977 (ED 009 378)

This study was designed to evaluate the educational experience for women at West Texas State University. Specifically, the study was designed to provide: (1) a profile of women students; (2) personal and professional information about individuals; (3) students' judgments of their acquisition of competencies and useful professional knowledge; (4) current information on educational and employment patterns; and (5) feedback on how the university experience might be improved. The method used to obtain this information was a mailed questionnaire to 558 women who were randomly selected to participate in the study. A copy of the questionnaire begins on the next page.

INFORMATION SHEET*

Name: _____ Age: _____

Marital Status: _____

Permanent Address: _____ Phone # _____

WT Address: _____ Phone # _____

Classification: _____ Major: _____

Texas Resident? _____

Date called: _____

Currently enrolled at WT? _____

Currently enrolled at another university? _____
Where: _____

How long since last attending school? _____

Willing to participate: Yes ____ No ____

Questionnaire sent: (Date) _____

Questionnaire returned: (Date): _____

A Follow-up Study of Women Attending
West Texas State University
From Fall, 1973, through Spring, 1976
(Former Students) *

A. MARITAL STATUS

1. Please classify your marital status at the time of your enrollment at West Texas State University:

a. ____ single
b. ____ married
c. ____ divorced
d. ____ separated
e. ____ widowed

2. Please classify your current marital status if it has changed since leaving West Texas State University:

a. ____ single
b. ____ married
c. ____ divorced
d. ____ separated
e. ____ widowed

3. If you have children, how many? How old?

Number _____ Ages ____
____
____
____

B. EDUCATIONAL GOAL IN ATTENDING WEST TEXAS STATE UNIVERSITY

4. Which option best describes your educational goal in attending WTSU?

a. ____ for general information
b. ____ to improve or advance in job
c. ____ to get a new job
d. ____ for a community activity
e. ____ for personal or family interest
f. ____ for social or recreational reasons
g. ____ to obtain degree
h. ____ other (specify) _____

5. Did you achieve the purpose stated above?

a. ____ Yes b. ____ No

If no, please explain. _____

_____

C. STATUS WHEN ENTERING WEST TEXAS STATE UNIVERSITY

6. Which best describes your status when you first entered WTSU?

a. ____ entered directly from high school
b. ____ entered after working for less than 3 years
c. ____ entered after working 3 years or more
d. ____ transferred from a 2-year college
e. ____ transferred from another 4-year institution
f. ____ other (specify) _____

7. What percentage of financial support did you receive from your family and others while attending WTSU?

a. ____ none
b. ____ 1-10%
c. ____ 11-19%
d. ____ 20-39%
e. ____ 40-59%
f. ____ 60-79%
g. ____ 80-100%

8. How many hours per week did you work while attending WTSU? _____

9. Excluding summer sessions, how many semesters were you enrolled at WTSU?

a. ____ 1-2
b. ____ 3-4
c. ____ 5-6
d. ____ 7-8
e. ____ 9-10
f. ____ 11+

How many summer sessions?

a. ____ 1-2
b. ____ 3-4
c. ____ 5-6

10. What was the average number of hours you carried per semester while enrolled at WTSU?

a. ____ 3-9
b. ____ 10-16
c. ____ 17-23

11. What kinds of courses did you mostly enroll in at WTSU?

a. ____ day
b. ____ evening
c. ____ both

D. CURRENT EDUCATIONAL STATUS AND ASPIRATION

12. Did you receive a degree from WTSU?
a. ____ yes b. ____ no

13. How many credit hours have you completed at WTSU? _____

14. Have you continued your education since leaving WTSU?

a. ____ I have taken no college courses since leaving.
b. ____ I have taken some college courses since leaving.
c. ____ I have achieved a bachelor's degree.
d. ____ I have achieved a bachelor's degree plus graduate courses.
e. ____ I have achieved a master's degree.
f. ____ I have achieved a professional degree.
g. ____ I have achieved a doctorate.

15. In the above question, if you have marked any responses "b" through "g", please list the school or schools.

_____

16. Do you plan to continue your education?

a. ____ Yes, at the undergraduate level at WTSU.
b. ____ Yes, at the undergraduate level but not at WTSU.
c. ____ Yes, at the graduate level at WTSU.
d. ____ Yes, at the graduate level but not at WTSU.
e. ____ No

17. In the above question, if you responded to "b" or "d", please indicate which college you will attend, when you will enroll, and what field you will pursue.

_____

_____

18. If you have not completed your educational program at WTSU, when did you leave the university?

a. ____ during 1st semester
b. ____ end of 1st semester
c. ____ during 2nd semester
d. ____ end of 2nd semester
e. ____ other (specify) _____

19. What affected your decision to leave WTSU? (State your single most important reason.)

a. ____ unavailability of financial aid
b. ____ personal financial situation got worse
c. ____ employment prospects for chosen field were poor at that time
d. ____ displeased with past academic performance
e. ____ pregnancy
f. ____ family problems
g. ____ marriage
h. ____ transportation problem
i. ____ unavailability of suitable child care

19. continued

j. ____ too much course work
k. ____ took a job
l. ____ lack of social life
m. ____ lack of self-confidence
n. ____ attitude of family
o. ____ mobility of family
p. ____ disappointed with experience at WTSU
q. ____ other (single most important reason) _____

_____

20. If you responded to "p" in the above question, please specify what you were disappointed with.

_____

_____

21. If you had intended to continue your education at WTSU but circumstances arose making it impossible to do so, please specify the single most important reason from the list in question "19" which affected your plans.

_____

E. JOB STATUS AND FUTURE PLANS

22. Are you working in your main area of educational preparation?
a. ____ Yes b. ____ No

23. Which of the following best describes your present employment status?

a. ____ professional-technical
b. ____ manager-administrator
c. ____ sales worker
d. ____ clerical worker
e. ____ service worker
f. ____ labor-farm worker
g. ____ unemployed
h. ____ other (specify) _____

24. If employed, what is your reaction to your job?

a. ____ well satisfied
b. ____ fairly satisfied
c. ____ undecided
d. ____ tolerate it
e. ____ dislike it

25. If employed and not satisfied with your present position, state the primary reason it has failed to meet your aspirations.

a. ____ undesirable location
b. ____ salary too low
c. ____ too routine
d. ____ poor working conditions
e. ____ too many responsibilities
f. ____ working outside educational preparation area
g. other (specify) _____

26. If employed, what influenced you most to accept your present job?

a. ____ desirable location
b. ____ salary offered
c. ____ liked people I interviewed with
d. ____ spouse works in community
e. ____ spouse attending the university
f. ____ other (specify) _____

27. If employed, what are your plans as far as your present position is concerned?

a. ____ intend to continue in same position
b. ____ plan to change positions
c. ____ am undecided at present
d. ____ plan to drop out for time being
e. ____ other (specify) _____

28. If employed, what are your plans as far as your present field is concerned?

a. ____ Intend to continue in same field
b. ____ plan to change fields
c. ____ am undecided at present
d. ____ plan to drop out for time being
e. ____ other (specify) _____

29. If not employed, indicate single most important reason.

a. ____ dissatisfied with job prepared for
b. ____ already financially secure
c. ____ professional
d. ____ personal
e. ____ did not plan to work
f. ____ unable to find employment in major field
g. ____ unable to find any suitable employment
h. ____ other (specify) _____

30. Which of the following best describes your future employment status?

a. ____ professional and technical
b. ____ manager and administrator
c. ____ sales worker
d. ____ clerical worker
e. ____ service worker
f. ____ labor and farm worker
g. ____ other (specify) _____

31. If employed, how did you locate your first job?

a. ____ faculty at WTSU
b. ____ WTSU placement office
c. ____ newspaper
d. ____ family and/or friend
e. ____ employment agency
f. ____ held same job while attending WTSU
g. ____ other (specify) _____

F. EVALUATION OF WTSU EDUCATIONAL EXPERIENCE

32. Please rate on a scale of 0-5 the following services provided by the university that you used or came into contact with.

0 - Did not use or come in contact with
1 - Excellent 2 - Good 3 - Average 4 - Fair 5 - Poor

a. ____ admissions program
b. ____ freshman orientation program
c. ____ academic atmosphere
d. ____ overall quality of instruction
e. ____ faculty instruction
f. ____ faculty availability outside of class
g. ____ counseling for course selection
h. ____ personal counseling
i. ____ student faculty relationships
j. ____ student relationships
k. ____ facilities available in major field or study
l. ____ overall university facilities
m. ____ learning resource centers
n. ____ availability of cultural programs
o. ____ variety of student extracurricular activities
p. ____ variety of student organizations
q. ____ intercollegiate athletics
r. ____ overall university atmosphere
s. ____ placement service
t. ____ financial aids
u. ____ health service
v. ____ food service
w. ____ university police

33. If employed, rate on a scale of 1-5 how your educational experience in your major field has helped you on the job. Please rate ONLY your major field of study.

1 - Excellent 2 - Good 3 - Average 4 - Fair 5 - Poor

a. ____ Agriculture Business and Economics
b. ____ Animal Science
c. ____ Plant Science
d. ____ Bible
e. ____ Biology
f. ____ Chemistry
g. ____ English
h. ____ Geography
i. ____ Geology
j. ____ Anthropology
k. ____ History
l. ____ Journalism
m. ____ Mathematics
n. ____ Military Science
o. ____ Modern Language
p. ____ Physics
q. ____ Political Science
r. ____ Sociology
s. ____ Social Work
t. ____ Accounting
u. ____ Business Administration
v. ____ Business Education
w. ____ Office Administration
x. ____ Computer Information Systems
y. ____ Elementary Education
aa. ____ Health, Physical Education, and Recreation
bb. ____ Industrial Education
cc. ____ Psychology
dd. ____ School Services
ee. ____ Art
ff. ____ Music
gg. ____ Speech and Theatre
hh. ____ Nursing
ii. ____ Counseling
jj. ____ Secondary and Higher Education

34. To what extent has your college training helped you in obtaining your present job?

a. ____ a great deal
b. ____ some
c. ____ little
d. ____ none

35. To what extent has your college training prepared you for your job skills?

a. ____ a great deal
b. ____ some
c. ____ little
d. ____ none

36. Would you recommend WTSU to a person seeking to complete the same program that you majored in here?

a. ____ yes
b. ____ no

If no, why? _____

_____

37. Please check the degree of satisfaction to which you feel WTSU prepared you for additional academic work.

a. ____ extremely satisfactorily
b. ____ satisfactorily
c. ____ unsatisfactorily

38. Were you interested in learning the course materials?
a. ____ yes
b. ____ no

39. Please rate on a scale of 1-5 the following classroom conditions.

1 - Excellent 2 - Good 3 - Average 4 - Fair 5 - Poor

a. ____ adequate lighting
b. ____ adequate ventilation
c. ____ sufficient blackboard space
d. ____ appropriate furniture
e. ____ conducive accoustics

40. Did you find child care a problem while attending school at WTSU?
a. ____ yes
b. ____ no

41. Did you find housing a problem while attending school at WTSU?
a. ____ yes
b. ____ no

42. On a scale of 1-4, rate the degree of concern shown for women students at WTSU by the listed groups of people.
1 - high 2 - moderate 3 - little 4 - none

a. ____ administration
b. ____ faculty in major field of study
c. ____ other faculty
d. ____ other students

43. On a scale of 1-5, please rate all of the fields of study below in which you have taken one or more courses.

1 - Excellent 2 - Good 3 - Average 4 - Fair 5 - Poor

a. ____ Agriculture Business and Economics
b. ____ Animal Science
c. ____ Plant Science
d. ____ Bible
e. ____ Biology
f. ____ Chemistry
g. ____ English
h. ____ Geography
i. ____ Geology
j. ____ Anthropology
k. ____ History
l. ____ Journalism
m. ____ Mathematics
n. ____ Military Science
o. ____ Modern Language
p. ____ Physics
q. ____ Political Science
r. ____ Sociology
s. ____ Social Work
t. ____ Accounting
u. ____ Business Administration
v. ____ Business Education
w. ____ Office Administration
x. ____ Computer Information Systems
y. ____ Business Economics
z. ____ Elementary Education
aa. ____ Health, Physical Education, and Recreation
bb. ____ Industrial Education
cc. ____ Psychology
dd. ____ School Services
ee. ____ Art
ff. ____ Music
gg. ____ Speech and Theatre
hh. ____ Nursing
ii. ____ Counseling
jj. ____ Secondary and Higher Education

G. PROFESSIONAL HONORS AND/OR RECOGNITIONS RECEIVED

44. Please list any professional honors and/or recognitions you received while attending WTSU.

_____

_____

H. SUGGESTIONS AND OBSERVATIONS FOR IMPROVING THE PROGRAMS AT WTSU

45. In what way could your experience at WTSU have been more helpful?

---

*Source: Bates, Enid Buswell and Jack M. Bullock. A Follow-up Study of Selected Women Attending West Texas State University from Fall 1973, through Spring, 1976, Final Report (Washington, D.C.: American Association of University Women, 1977).

Burkheimer, Graham J., et al. Evaluation of the Upward Bound Program: A First Follow-up. Final Report. Durham, North Carolina: Research Triangle Institute, Center for Educational Research and Evaluation, 1977. (ED 148 891)

This study is an attempt to obtain information about educational outcomes for the Upward Bound Program participants. "The Upward Bound Program was designed to reach low income high school students who have potential for successfully completing an educational program, but who, due to inadequate preparation and/or lack of motivation, are prevented from meeting conventional criteria for admission to a postsecondary program. Through the use of various intervention techniques . . . the program is legislatively mandated to generate in participants the skills and motivation necessary to enter and successfully complete postsecondary education."

From the 333 regular Upward Bound programs operating, 54 were selected to participate in this study. A total of 3,710 students from the 54 programs were sampled. Each respondent was asked to complete an eight-item mail questionnaire which was designed to tap their educational and employment achievement. The questionnaire appears on the next page.

Follow-up Questionnaire for Nationwide Study of Young Adults*

My name and address are

____ Both OK as printed

____ Correct my name to _____
First Middle Last

____ Correct my address to _____
Street, Route, and/or Box Address

_____
City State Zip Code

The telephone number at which I can be reached is _____
Area Code Number

---

1. What is the highest educational level you have completed? (Circle only one)

| High School | Trade or Vocational School | College University |
|---|---|---|
| 1--10th grade | 4--Less than 1 year | 7--1st year |
| 2--11th grade | 5--One year | 8--2nd year |
| 3--12th grade | 6--Two or more years | 9--3rd year |
| | | 10--4th year |

---

2. Are you currently working? (Circle only one)

1--No
2--Yes, full-time
3--Yes, part-time

---

3. Are you currently serving in the military? (Circle only one)

1--I've never been in the service.
2--I'm in the service now.
3--I'm now a veteran.

---

4. Are you currently enrolled in any school? (Circle only one)

1--Not enrolled
2--Enrolled part-time
3--Enrolled full-time

---

5. Please give the exact name and location of the school you are attending or last attended. (Please do not abbreviate)

School Name _____

City _____ State _____

6. What is the greatest amount of schooling you expect to complete? (Circle only one)

1--High school only
2--Vocational, trade, or business school
3--Some college
4--Finish 4 year college (BA, BS)
5--Graduate or professional degree (MA. Ph.D.) MD)

7. What problems have you had in getting the kind of education you would like to get? (Circle all that apply)

1--Poor grades
2--Poor high school preparation
3--Lack of personal or family finances
4--Inadequate financial aid
5--Program I wanted is not available
6--Family responsibilities

8. Did you ever participate in an Upward Bound Program? (Circle all that apply)

1--Never
2--Yes in grade 10
3--Yes in grade 11
4--Yes in grade 12

THANK YOU FOR YOUR COOPERATION

OE Form 524

OMB No. 51-S76047
Approval Expires June 30, 1977

*Source: Graham J. Burkheimer, et. al. Evaluation of the Upward Bound: A First Followup, Final Report (Durham, North Carolina: Research Triangle Institute, Center for Educational Research and Evaluation, 1977). (ED 148 891)

Fisher, Steven D., et al. Postsecondary Programs for the Deaf: II. External View. Research Report No. 61. Minneapolis, Minnesota: University of Minnesota, Research, Development, and Demonstration Center in Education of Handicapped Children, 1974. (ED 106 999)

This study focused on the follow-up of deaf students from postsecondary vocational technical programs. The information was obtained from former deaf students employed at the time of the study, their immediate supervisors, parents and vocational rehabilitation counselors. Personal interviews and mail survey questionnaires were used to collect the data. Data were collected from students concerning their vital statistics, job satisfaction, economic and employment status, aspirations, and views of the training and program. The interviews with immediate supervisors focused on the current occupational status of the employee, training, communications between supervisor and employee, employee productivity, the attitude of the supervisor, and the size and nature of the company. Rehabilitation counselors were queried about referral procedures, training, and client communications. Data from parents were also examined concentrating on the occupational status of their son/daughter, their vocational or technical training, and their reactions to training. The following pages contain copies of the instruments used to collect information from each of these four sources.

INTERVIEW WITH YOUNG DEAF ADULT*

I. Vital Information Date _____

a. Name _____

b. Birthdate _____

c. Male or Female _____

d. Address _____ Phone _____

e. Parents

(1) Name _____

(2) Address _____ Phone _____

f. Marital Status

(1) Married _____ (a) number of children _____

(2) Single _____ (a) engaged _____
(b) go steady _____
(c) neither _____

(3) Divorced _____

g. Is your wife (husband) deaf? _____ Hard of hearing? _____

Hearing? _____

h. Are you:

working (employed) _____
housewife _____
student _____
none _____

If "none," explain, i.e., unemployed, etc. _____

i. What school are you attending now? _____

II. Occupational Status (Do not ask II, III, or IV if continuous student)

a. Jobs (begin with present job and work back to first job)

1. Company _____ Address _____

Description of work _____

_____

Dates of employment _____

Still working there _____

Reason for departure _____

Date of departure _____

2. Company _____ Address _____

Description of work _____

_____

Dates of employment _____

Still working there _____

Reason for departure _____

Date of departure _____

3. Company _____ Address _____

Description of work _____

_____

Dates of employment _____

Still working there _____

Reason for departure _____

Date of departure _____

4. Company _____ Address _____

Description of work _____

_____

Dates of employment _____

Still working there _____

Reason for departure _____

Date of departure _____

III. Job Satisfaction and Communication (Ask III if presently employed full or part time)

a. How did you find your job? (Vocational rehabilitation, want ad, employment service, friend, parents, school, etc.)

_____

b. Do you like your job?

Like it very much ____
Okay ____
Dislike most things about it ____

c. Why do you feel this way about your job? _____

_____

_____

d. Do you want to keep your job or would you want to change?

Keep my job ____ Change jobs ____

e. If the answer is "Change Jobs" why do you want to change?

_____

_____

f. How do you communicate with your boss (immediate supervisor)?

Speech ____ Formal signs ____
Writing ____ Natural gestures ____

g. Does your boss understand you?

Always ____ Sometimes ____
Most of the time ____ Never ____

h. How does your boss communicate with you?

Speech ____ Formal signs ____
Writing ____ Natural gestures ____

i. Do you understand your boss?

Always ____ Sometimes ____
Most of the time ____ Never ____

j. What is the easiest means of communication?

Speech ____ Natural gestures ____
Writing ____ Other (specify) _____
Formal signs ____ _____

k. Do you think your boss would give you a better job if one were available?

Yes ____ No ____ Not Sure ____

l. If "no," why? _____

_____

_____

IV. Economic Status (Ask Part IV only if presently employed full or part time)

a. Do you work full time? ____

Average number of hours ____
Do you work part time? ____
Average number of hours ____

b. Not including overtime, what is your gross and net pay (indicate both)?

_____

c. Do you ever work overtime? Yes ____ No ____

d. If yes, how much money, on the average, do you make each week on overtime? _____

e. Do you receive financial help from anyone? (excluding husband or wife)? _____

f. If "yes" from whom? Give average weekly amount. (count room and board at $15 per week).

Source _____ Average weekly amount _____

V. Aspirations

a. What occupation would you like to have in ten years? (Person may choose homemaker)

_____

b. Do you think that you will have that occupation in ten years?

Yes ____ No ____ Not sure ____

c. Would this job require more training?

Yes ____ No ____ Kind of training _____

d. If the answer to b is "no" or "not sure," why won't you have that job?

_____

_____

_____

e. Would you prefer to go to school with:

Hearing students ____ Both ____
Deaf students ____ Makes no difference ____

f. Why? _____

_____

_____

VI. Students (To be asked in addition to Sections I and V)

a. When you leave this school, what do you plan to do?

(1) Go to college ____
(2) Go to work ____

a. What kind of work will you look for? _____

_____

(3) other (explain) _____
(4) undecided ____

b. Have you ever had any summer or part time job? _____

c. If "yes" describe: _____

_____

VII. Satisfaction with Training (both present and past students)

a. Are you satisfied with the training you received (are receiving) at this school?

b. If the answer to "a" is no, why are you not satisfied with the training?

_____

_____

_____

(1) Location _____

(2) Duration in minutes _____

(3) Interviewer _____

*Source: Steven D. Fisher, et.al. Postsecondary Programs for the Deaf: II. External View. Research Report No. 61.

## INTERVIEW WITH IMMEDIATE SUPERVISOR*

I. General Information Date _____

a. Name of deaf employee _____

b. Company _____ Address _____

c. Supervisor being interviewed _____

d. Name _____ Position _____

II. Current Occupational Status of Employee

a. Describe in detail the work performed by the employee:

_____

_____

b. Describe all previous jobs, if any, held by the employee in this company?

_____

_____

c. If the employee has held different jobs, does his present job constitute:

a promotion ____ a demotion ____ neither ____

d. If the employee has held different jobs, is his/her salary now:

higher ____ lower ____ the same ____

III. Training

a. In order to acquire proficiency in the employee's present job, what is required? (check one)

1. simple demonstration ____
2. on the job training ____
3. classes conducted by company ____
4. possession of trained skills ____ (prior to hiring)

b. Describe any training required prior to hiring for present job.

_____

_____

c. If employee received training at a technical/vocational school before being hired, do you think this training was adequate?

Yes ____ No ____ Does not apply ____

d. If answer to "c" is no, explain: _____

_____

e. Do you feel that additional training would benefit the employee?

Yes ____ No ____ Not sure ____

f. Why? _____

_____

g. What opportunities for advancement do you think he/she has in your company without further training?

Considerable ____ Limited ____ None ____

h. Why? _____

_____

i. What opportunities exist with further training?

Considerable ____ Limited ____ None ____

j. Why? _____

_____

k. List any jobs in your company which you feel that the employee could handle with more training.

_____

_____

l. If you are in favor of further training for the employee, what type of training would you suggest?

_____

_____

IV. Communication

a. Do you communicate with this employee? Yes ____ No ____

b. How do you communicate with this employee?

Speech and speech reading ____
Sign language ____
Writing ____
Gestures ____
Fingerspelling ____
Other (specify) _____

c. Have you learned sign language? Yes ____ No ____

d. Does the employee understand your instructions?

Always ____ Occasionally ____
Usually ____ Never ____

How well do you understand his/her speech?

All of it ____ Some of it ____
Most of it ____ None of it ____

V. Productivity

a. How would you rate this employee in comparison with others doing the same job?

Above average ____ Average ____ Below average ____

b. Can you list any aspects of the employee's job which are complicated by his deafness?

_____

_____

c. Name some personal qualities, if any, of the employee which you feel contribute to his value as a worker.

_____

d. Name some personal qualities, if any, of the employee which detract from his value as a worker.

_____

VI. Attitude of Immediate Supervisor

a. If the decision were yours, would you favor having more deaf people working under you?

Yes ____ No ____ Not Sure ____

b. If "no" or "not sure," why? _____

_____

c. Would you prefer not to have deaf employees working under you?

Yes ____ No ____ Not Sure ____

d. Any additional comments you care to make? _____

_____

_____

VII. Size and Nature of Company

a. What is the nature of the work your company engages in?

_____

_____

_____

b. How many people in all are employed by your company? _____

(1) Location _____

(2) Duration in minutes _____

(3) Interviewer _____

*Source: Steven D. Fisher, et.al. Postsecondary Programs for the Deaf: II. External View. Research Report No. 61.

VOCATIONAL REHABILITATION COUNSELOR QUESTIONNAIRE *

The Minnesota Research, Development and Demonstration Center in Education of Handicapped Children is currently gathering data from three demonstration postsecondary projects for the hearing-impaired in an attempt to formulate guidelines for the establishment of additional programs (Title: Improved Vocational, Technical, and Academic Opportunities for Deaf People: Research Component). These projects are funded through the cooperation of the Vocational Rehabilitation Association and the Bureau of the Education of the Handicapped. Your answers on this questionnaire will be a valuable supplement to our data gathering effort. Please answer the questions to the best of your ability and feel free to write down additional information if you desire to do so.

I. General Information (to be completed by RD&D Center personnel)

A. Name of vocational rehabilitation counselor _____

Address _____

B. Name of hearing impaired client _____

Address _____

C. Postsecondary program attended _____

Address _____

II. Procedure for Referral

A. Where do you obtain information for referral of the hearing impaired client for training?

_____

_____

B. Are you contacted by the programs for the hearing impaired? _____

If the answer to "B" is yes, briefly outline the procedure followed.

_____

_____

C. Do you contact the program for the hearing impaired? _____

If the answer to "C" is yes, briefly outline the procedure followed.

_____

_____

D. What do you consider the most positive aspects of the referral procedure presently employed?

_____

_____

_____

E. What do you consider the most negative aspects of the referral procedure presently employed?

_____

_____

_____

F. What changes would you make in the present referral procedures?

_____

_____

III. Training Received by Client

A. Do you feel that the training received by your client in his/her postsecondary program was adequate? _____

If the answer to "A" is no, why? _____

_____

_____

If the answer to "A" is yes, what do you consider to be the best features of the training program? _____

_____

_____

B. Did you play a major part in recommendation for a specific type of training for your client in the postsecondary program?

_____

_____

If the answer to "B" is yes, describe your role?_____

_____

_____

If the answer to "B" is no, do you feel you should play a greater role?

_____

What do you feel you can contribute? _____

_____

_____

C. Do you feel that your client's schooling prior to postsecondary training was adequate? _____

If the answer to "C" is no, why?_____

_____

If the answer to "C" is yes, what do you consider to be the best features of this schooling? _____

_____

_____

IV. Communication with Client

A. How did you communicate with your client?

Speech and speech reading ____
Sign language ____
Fingerspelling ____
Writing ____
Gestures ____
Interpreter aid ____
Other (specify) _____

B. How much of his communication--no matter what form it took--did you understand?

All of it ____ Some of it ____
Most of it ____ None of it ____

If you did not understand your client's communication, what means did you employ to fully understand it? _____

C. How much of the speech did you understand?

All of it ____ Some of it ____
Most of it ____ None of it ____

D. What manner of communication is employed by the parents (guardians) of the client with their child?

Speech and speech reading ____
Sign language ____
Fingerspelling ____
Writing _____
Gestures ____
Other (specify) _____
Not applicable ____
Not available ____

As nearly as you can determine, is this communication effective?
Yes ____ No ____

If the answer is no, why? _____

_____

_____

V. Additional Information

*Source: Steven D. Fisher, et al. Postsecondary Programs for the Deaf: II. External View. Research Report No. 61.

## QUESTIONNAIRE FOR MOTHER*

Please follow these guidelines in answering this questionnaire.

Answer all the questions that apply to your son or daughter. You will be unable to answer some if your son or daughter is still in school.

I. General Information

a. Deaf son or daughter's full name _____

Address _____ Age _____

Male ____ Female ____

b. Parents' name _____

Address _____

c. Your occupation _____

Address _____

d. Are you deaf? ____ Hard of hearing? ____ Hearing? ____

II. Occupational Status of Son or Daughter

a. Is your son or daughter:

working full time ____
working part time ____
going to school ____
looking for work ____
a homemaker not employed outside ____
other (please explain) _____

b. If your child is working, please describe his/her job. _____

_____

_____

c. Do you feel that this is a good job for your son or daughter?
Yes ____ No ____

d. Why? _____

_____

e. What do you believe would be a good job, given the necessary training, for your son or daughter? _____

_____

f. Why? _____

_____

III. Vocational/Technical Training

a. Prior to attending a technical/vocational program, was his/her education at the secondary level in: (check more than one if appropriate)

(1) a residential school for the deaf ____
(2) a day program for the deaf ____
(3) an integrated high school ____

b. Please answer the following questions concerning the training your child received in a technical/vocational program for the deaf.

(1) name of school _____

(2) address _____

(3) general course taken _____

(4) length of course _____

(5) dates attended _____

(6) Did he or she graduate? Yes ____ No ____

(7) What was the total cost to you personally? _____
(books, tuition, board, transportation, etc.)

(8) Did he or she receive any outside financial assistance?

Yes ____ Source _____

No ____ Amount _____

(9) Did your child encounter difficulties of any kind during her/his course? Yes ____ No ____

If yes, describe. _____

_____

IV. Reactions to Vocational/Technical Training

a. Do you favor having postsecondary programs for the hearing impaired within ongoing programs for students with normal hearing?

Yes ____ No ____ Not Sure ____

Why? _____

_____

b. How do you feel about your child's vocational/technical training?

(1) Satisfied ____
(2) Dissatisfied ____
(3) Mixed Reactions ____

Why? _____

_____

c. What, if any, do you see to be the good points of your child's vocational/technical training?

_____

_____

_____

d. What, if any, do you see to be the bad points? _____

_____

_____

_____

e. How much contact did you have with the program your child attended? Was it adequate? ____ Inadequate? ____

Explain _____

_____

V. Other Children (indicate whether hearing, deaf, or hard of hearing)

1. Names | Age | Sex | Highest Grade Completed (note if still in school)

_____ ___ ___ _____

_____ ___ ___ _____

_____ ___ ___ _____

_____ ___ ___ _____

_____ ___ ___ _____

2. Fill in for any hearing son or daughter presently employed.

Name _____ Weekly Wages _____

Job Description _____

_____

_____

Name _____ Weekly Wages _____

Job Description _____

_____

_____

Name _____ Weekly Wages _____

Job Description _____

_____

_____

Signature of person filling in questionnaire _____

(If relationship is not mother, please indicate) _____

*Source: Steven D. Fisher, et.al. Postsecondary Programs for the Deaf: II. External View. Research Report No. 61.

## QUESTIONNAIRE FOR FATHER *

Please follow these guidelines in answering this questionnaire.

Answer all the questions that apply to your son or daughter. You will be unable to answer some if your son or daughter is still in school.

I. General Information

a. Deaf son or daughter's full name _____

Address _____ Age _____

Male ____ Female ____

b. Parents' name _____

Address _____

c. Your occupation _____

Address _____

II. Occupational Status of Son or Daughter

a. Is your son or daughter:

working full time ____
working part time ____
going to school ____
looking for work ____
a homemaker not employed outside ____
other (please explain) _____

b. If your child is working, please describe his/her job: _____

_____

_____

c. Do you feel that this is a good job for your son or daughter?
Yes ____ No ____

d. Why? _____

_____

e. What do you believe would be a good job, given the necessary training, for your son or daughter? _____

_____

f. Why? _____

_____

III. Vocational/Technical Training

a. Prior to attending a technical/vocational program, was his/her education at the secondary level in: (check more than one if appropriate)

(1) a residential school for the deaf ____
(2) a day program for the deaf ____
(3) an integrated high school ____

b. Please answer the following questions concerning the training your child received in a technical/vocational program for the deaf.

(1) name of school _____

(2) address _____

(3) general course taken _____

(4) length of course _____

(5) dates attended _____

(6) Did he or she graduate? Yes ____ No ____

(7) What was the total cost to you personally? _____
(books, tuition, board, transportation, etc.)

(8) Did he or she receive any outside financial assistance?

Yes ____ Source _____

No ____ Amount _____

(9) Did your child encounter difficulties of any kind during his course? Yes ____ No ____

If yes, describe: _____

_____

IV. Reactions to Vocational/Technical Training

a. Do you favor having postsecondary programs for the hearing impaired within ongoing programs for students with normal hearing?
Yes ____ No ____ Not Sure ____

Why? _____

_____

b. How do you feel about your child's vocational/technical training?

(1) Satisfied ____
(2) Dissatisfied ____
(3) Mixed Reactions ____

Why? _____

_____

c. What, if any, do you see to be the good points of your child's vocational/technical training?

_____

_____

_____

d. What, if any, do you see to be the bad points?

_____

_____

_____

e. How much contact did you have with the program your child attended?
Was it adequate? ____ Inadequate? ____

Explain: _____

_____

V. Other Children (Indicate whether hearing, deaf, or hard of hearing)

| 1. Name | Age | Sex | Highest Grade Completed (note if still in school) |
|---|---|---|---|
| _____ | ___ | ___ | _____ |
| _____ | ___ | ___ | _____ |
| _____ | ___ | ___ | _____ |
| _____ | ___ | ___ | _____ |
| _____ | ___ | ___ | _____ |

2. Fill in for any hearing son or daughter presently employed.

Name _____ Weekly wage _____

Job Description _____

_____

_____

Name _____ Weekly wage _____

Job Description _____

_____

_____

Name _____ Weekly wage _____

Job Description _____

_____

_____

Signature of person filling in questionnaire _____

(If relationship is not father, please indicate) _____

_____

*Source: Steven D. Fisher, et.al. Postsecondary Programs for the Deaf: II. External View. Research Report No. 61.

Quanty, Michael. 1975 Career Student Follow-up: Initial Placement. Overland Park, Kansas: Johnson County Community College, 1976 (ED 126 999)

This study sampled 177 students in the career education program (both graduates and non-graduates) who left with marketable skills. Seven (7) of the students in the sample were hearing impaired. While the data generally were collected over the telephone, hearing impaired students were contacted in person. The interview was designed to capture information in two areas. First, respondents were queried as to their employment status (e.g., current job, salary) and the utility of the program. Second, questions were aimed at each type of training course provided at the community college (e.g., nursing, data processing) to determine its effectiveness. The forms used to collect the data begin on the next page.

CAREER STUDENT QUESTIONNAIRE*

Student's Name _____ Phone _____

Address _____ SS # _____

CALL RECORD

| Time | Date | # called | Respondent | Call back |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Person giving final interview: _____

Notes: _____

BEGIN INTERVIEW

Is this the residence of (Student's Name)?

May I speak to (Student's Name)? (If not available, record day, time and phone number for call back).

This is (your name) of Johnson County Community College. The College is conducting a follow-up study of students who have been enrolled in our career programs. This is to obtain information required by the State and to more accurately assess the effectiveness of our career programs. May I ask you a few questions?

Let me begin by checking to see if our information is correct.

Your name is _____ (See Above)

Your Social Security number is _____

Your address is _____

Your home phone number is _____

1. What is your age? ____ Sex: Male ____ Female ____

Marital Status: Married ____
Single ____

2. Are you currently in the Armed Forces?

____ Yes (reserves? ____)
____ No

3. Are you currently employed?

____ Yes Full time? ____ Part time? ____

What is your job title? _____

Who is your employer? _____

_____

Address City State Phone #

Would you say that your current job is:

____ 1. The occupation for which you trained.
____ 2. An occupation related to your training:

a. Did your JCCC course work help you obtain the job?
____ Yes ____ No
b. Do you feel the JCCC program can adequately prepare a person for this type of job?
____ Yes ____ No
c. Overall, would you rate the JCCC program as being:
____ Excellent ____ Adequate
____ Good ____ Poor
d. What is your gross annual salary (before overtime and taxes)? $_____ Monthly $_____

____ 3. An occupation not related to your training:

a. What is your gross annual salary (before overtime and taxes)? $_____ Monthly $_____
b. Do you intend to ultimately work in a job related to your program area?
____ Yes ____ No
c. Overall, would you rate the JCCC program as being:
____ Excellent ____ Adequate
____ Good ____ Poor

____ No Are you seeking employment? ____ Yes ____ No

Overall, would you rate the JCCC program as being:
____ Excellent ____ Adequate
____ Good ____ Poor

4. Are you currently attending school?

____ Yes Full-time? ____ Part-time? ____

a. What school are you attending? _____

b. Are you in school in vocational or technical teaching training? ____ Yes ____ No

c. Are you in school in a field related to your training at JCCC? ____ Yes ____ No

d. What is the highest grade level you have completed? _____

____ No (If unemployed determine if: disabled ____ or deceased ____)

5. Do you have any questions or comments that you would like to make concerning the JCCC?

_____

_____

_____

_____

*Source: Michael Quanty. 1975 Career Student Follow-up. Initial Placement (Overland Park, Kansas: Johnson County Community College, 1976). (ED 126 999)

ADDITIONAL QUESTIONS - DATA PROCESSING*

1. If JCCC training did not help them obtain their job:

   a. Did the JCCC course work upgrade your previous job skill?

      ____ Yes ____ No

   b. Did the JCCC course work help you with professional advancement?

      ____ Yes ____ No

2. What additional courses would you like to have? _____

_____

ADDITIONAL QUESTIONS - DRAFTING AND ELECTRONICS PROGRAM

For Three-Year Follow-up:

Question #3 - Add following questions on the end:

<u>If working in unrelated area or unemployed</u>:

1. Since you left JCCC have you ever worked in a job related to your training? Yes ____ No ____

   Why did you change jobs (or quit working)? _____

   _____

<u>If working in related area</u>:

1. Is your current job your only job since leaving JCCC?
   Yes ____ No ____

   If yes, how has your job title or your position changed since you began this job?

   _____

   _____

   If no, was your previous job (jobs) related to your training?
   Yes ____ No ____

   Why did you change jobs? _____

   _____

## ADDITIONAL QUESTIONS - NURSING*

1. In what area of nursing do you feel you were best prepared to practice?

   _____

2. In what area of nursing do you feel you were the least prepared to practice?

   _____

3. If you could add something to your basic preparation, what would it be?

   _____

   _____

4. How do you feel you compare to other graduates in your ability to give high quality patient care?

   _____

   _____

5. What was your initial position following graduation? _____

   _____

   What is your position at this time? _____

   _____

## ADDITIONAL QUESTIONS - MARKETING AND MANAGEMENT

1. Would you be interested in participating in an alumni group?

   ____ Yes ____ No ____ Maybe

Question #5 - Ask for number of College Credits.

For One Year Follow-up:

Question #5 - Also ask for number of College Credits.
Add after question #3 - If not related to unemployed:

Were you previously employed in a job related to your training?
Yes ____ No ____

If yes, why did you change jobs (or quit working)?

_____

_____

*Source: Michael Quanty. 1975 Career Student Follow-up. Initial Placement (Overland Park, Kansas: Johnson County Community College, 1976). (ED 126 999)

Powers, Gerry and Lewis, James. Follow-up of Hearing Impaired Graduates of Pennsylvania (1970-1975). Bloomsburg, Pennsylvania: Bloomsburg State College, 1976.

A follow-up study was conducted of hearing impaired graduates in Pennsylvania. The purpose of the study was to gather information on graduates and their employers in order to assist in the evaluation of vocational and academic curriculum, and plan for future programs. A sample of 167 hearing impaired residents of and graduates from Pennsylvania educational institutions from 1970-1975 were selected to be interviewed (out of a total population of approximately 600). Four basic instruments were used to collect the information--a Student Questionnaire, an Educational History Form, a Parent Follow-up Survey, and an Employer Survey. Face-to-face interviews generally were conducted with parents, students and employers. Thus, interviewers were selected who had the ability to communicate with the hearing impaired since a face-to-face interviewing process was utilized and were affiliated with the hearing impaired in some professional way (e.g., teachers, counselors). The following pages contain copies of the follow-up instruments.

FOLLOW-UP SURVEY OF FORMER VOCATIONAL STUDENTS
(Hearing Impaired)*

Name _____
Last First Middle Initial

Married Name _____
Last First Middle Initial

School Residential ( ) Day School ( )
Day Student ( ) Day Class ( )
Public School ( )

Home Address _____
Street City State Zip Code

Parent Address _____
Street City State Zip Code

Employer Name _____

Employer Address _____

Birth Date: _____ Sex _____ Soc. Sec. No. _____

Year Graduated _____ Course _____

Interviewer _____ Date _____

1. Marital Status:
   ____ Married
   ____ Single
   ____ Separated
   ____ Divorced
   ____ Widowed

2. Does your spouse have a hearing loss? ____ Yes
   ____ No
   ____ Number of children
   Number of children that have a hearing loss _____

3. Does your father have a hearing loss? ____ Yes ____ No
   Does your mother have a hearing loss? ____ Yes ____ No

4. How would you describe your present relationship with your parents?
   ____ Very Successful ____ Somewhat Unsuccessful
   ____ Somewhat Successful ____ Very Unsuccessful

*Source: G. Powers and J. Lewis. 1970-1975 Follow-up of Hearing Impaired Graduates of Pennsylvania (Bloomsburg, Pennsylvania: Bloomsburg State College, 1976).

5. Number of friends that have hearing loss. _____ Deaf Friends
_____ Hearing Friends

6. Number of memberships in clubs. ____ Deaf Clubs
____ Hearing Clubs

7. Hearing aid?
____ Is wearing a hearing aid
____ Is not wearing a hearing aid
____ Does own hearing aid
____ Does not own a hearing aid

8. What did you like about your educational program? _____

_____

9. What did you dislike about your educational program? _____

_____

10. Were you ever informed about the educational or vocational program available to you? ____ Yes ____ No
If yes, who informed you? _____

11. Do you feel you had enough information for selecting a senior high program in college prep or vocational education? If yes, explain the type of information received.

_____

_____

12. Are you now self-supportive? ____ Yes ____ No If no, explain why:

_____

13. Do you feel your vocational training in senior high was adequate for today's job market? If yes, explain why you feel training was adequate.

_____

_____

If no, explain why it was not adequate _____

_____

14. If employed, please answer. Present job: _____

15. Do you have a driver's license? ____ Yes ____ No
If yes, who instructed you? _____

Do you own a car? ____ Yes ____ No

16. Respond to the following communication information:

| | Good | Average | Poor |
|---|---|---|---|
| Manual communication | ( ) | ( ) | ( ) |
| Speechreading | ( ) | ( ) | ( ) |
| Speech | ( ) | ( ) | ( ) |
| Writing | ( ) | ( ) | ( ) |
| Hearing | ( ) | ( ) | ( ) |
| Gestures | ( ) | ( ) | ( ) |

A. Mark each that refers to you:

( ) I work full time.
( ) I work part time.
( ) I do not work, but am looking for a job.
( ) I do not work.
( ) I take care of my house all the time.
( ) I go to college full time.
( ) I go to college part time.
( ) I go to a vocational school full time.
( ) I go to a vocational school part time.

B. Did anyone at your school talk to you about what you would do after you finished school? ____ Yes ____ No
If yes, who? _____

Did your school give you a list of bosses who need workers to help you find a job? ____ Yes ____ No

Did any possible bosses offer you a job before you left school?
____ Yes ____ No

Did you get a job because of a boss talking to you before you left school? ____ Yes ____ No

Did your school give you a lot of help in finding a job?
____ Very much help ____ Some help
____ Much help ____ No help

When you left school, did you want a job doing what you did in school? ____ Yes ____ No

Do you still want a job doing what you did in school? ____ Yes
____ No

C. Where do you work now?

Name of company or firm _____

Address _____

Same county as school? ____ Yes ____ No
Another county near the school? ____ Yes ____ No
Some other county in state _____ ____ Yes ____ No
Another state near _____ ____ Yes ____ No
Another state not near _____ ____ Yes ____ No

Did you have a full time job before you left high school? ____ Yes
____ No

How long after you left school did you start your first full time job?

____ Right away
____ 2 weeks
____ 4 weeks
____ 6 weeks
____ 8 weeks
____ 10 weeks
____ 12 weeks
____ 14 weeks
____ 16 weeks
____ more than 16 weeks

How much money do you make a month before money is taken out for taxes?

____ below $400
____ 400-449
____ 450-499
____ 500-549
____ 550-599
____ 600-649
____ 650-699
____ 700-749
____ 750-800
____ more than 800

Did your school do a good job in training you for the job you have now?

____ very good training for present job
____ good training
____ not so good
____ bad training

What kind of job do you do? _____

Do you use what you learned in school in the job you have now?

____ The same thing as you did in school.
____ Almost the same thing you did in school.
____ Some of the things you did in school.
____ Not what you did in school.

What was the reason for not getting a job like you were trained for in school?

____ I did not want to do what I was trained for.
____ I tried, but could not get a job in what I was trained for.
____ I did not think I learned enough to get a job in what I was trained for.
____ The pay was not enough.
____ Too little opportunity for advancement.
____ I would not be able to get a better job.
____ I did not like the working conditions.
____ I got a chance for a better job.
____ I was not able to work in the apprentice program.
____ Other

How did you get your first full time job after you left school?
____ Your school helped you
____ Your vocational teacher helped you
____ Your counselor
____ Other teacher
____ Your family, parents
____ Your friends
____ By yourself
____ Through an office at school
____ Through an office of the state
____ Private employment agency
____ Through school placement office

What kind of school do you go to now? Is it in _____? Do you live at home or at school? Does what you're studying now have anything to do with what you were trained for in high school?

____ Community College
____ Private 2 year college
____ State college branch campus
____ state college main campus
____ Private 4 year college
____ Private business school
____ Private technical school
____ Area vo-tech school
____ Other school

Location:
____ In-state
____ Out of state

Residence:
____ At home
____ At school

Relation:
____ Related
____ Unrelated

Name and Address: _____

_____

This is a scale. Please answer the questions on this scale. The questions tell us what you like about your job. They tell us what you don't like about your job. This scale will be sent to all hearing impaired people in _____. We want to find out what hearing impaired people like and dislike about their jobs. This is confidential. No one will see this except us. We will not show it to your employer.

Directions:

There are 20 questions below. Read each question slowly. Take your time. Think about each question. Fill in the circle that tells how you feel about the sentence. The circles are not the same. The circles have these meanings or definitions.

| | Sign |
|---|---|
| A means I like this very much | Very Good |
| B means I think this is okay | Okay |
| C means I can't decide | Don't know |
| D means I don't like this | Don't like |
| E means this bothers me a lot | Very bad |

Please fill in one circle after each question.

| MY JOB: | A | B | C | D | E |
|---|---|---|---|---|---|
| (1) Keeps me busy (activity). | o | o | o | o | o |
| (2) Lets me work alone. | o | o | o | o | o |
| (3) Lets me do different things. | o | o | o | o | o |
| (4) Makes me feel important outside of work. | o | o | o | o | o |
| (5) Lets me do things I think are right. | o | o | o | o | o |
| (6) Is a sure job--I will have this job in the future. | o | o | o | o | o |
| (7) Lets me help other people. | o | o | o | o | o |
| (8) Lets me tell other people what to do. | o | o | o | o | o |
| (9) Lets me use what I know. | o | o | o | o | o |
| (10) Is good pay - pays good. | o | o | o | o | o |
| (11) Makes me work hard (work incentive). | o | o | o | o | o |
| (12) Lets me try things my way. | o | o | o | o | o |
| (13) Is a good place to work. | o | o | o | o | o |
| (14) The people get along good. | o | o | o | o | o |
| (15) Tells me I do good work. | o | o | o | o | o |
| (16) Makes me feel I do good work. | o | o | o | o | o |
| (17) What do you think of company rules? | o | o | o | o | o |
| (18) Can you get better job here? | o | o | o | o | o |

MY BOSS:

| | | | | | |
|---|---|---|---|---|---|
| 1. Is fair to the workers. | o | o | o | o | o |
| 2. Knows his/her responsibilities and tasks. | o | o | o | o | o |

PARENT FOLLOW-UP SURVEY*
(For the Follow-up Study of Former Vocational Students Classified as Hearing Impaired)

Name of son/daughter _____

If son/daughter named above is adopted, please check here _____

1. Mother's age _____ Father's age _____

2. Parents' marital status: ____ Married ____ Single ____ Widowed
   ____ Divorced ____ Separated

3. Mother's hearing: ____ Normal Hearing ____ Hearing Impaired (or Deaf)
   Please give age when hearing loss occurred: _____

4. Father's hearing: ____ Normal Hearing ____ Hearing Impaired (or Deaf)
   Please give age when hearing loss occurred: _____

5. What is the highest grade you and your spouse completed in school? (Check the correct line and then circle the last grade completed)

| Mother | Father |
|---|---|
| ____ Grade School 1 2 3 4 5 6 7 8 | ____ Grade School 1 2 3 4 5 6 7 8 |
| ____ High School 1 2 3 4 | ____ High School 1 2 3 4 |
| ____ Vocational or Secretarial 1 2 3 4 | ____ Vocational or Secretarial 1 2 3 4 |
| ____ College/University 1 2 3 4 5+ | ____ College/University 1 2 3 4 5+ |
| ____ School for Deaf | ____ School for Deaf |

6. Father's occupation:

   a. What is the usual occupation of the father? _____
   b. What is the current occupation of the father?
      ____ same as above ____ unemployed ____ other

---

*Source: G. Powers and J. Lewis. 1970-1975 Follow-up of Hearing Impaired Graduates of Pennsylvania (Bloomsburg, Pennsylvania: Bloomsburg State College, 1976).

7. Mother's occupation:

a. What is the usual occupation of the mother?
____ Full time housewife
____ Other (describe) _____

b. What is the current occupation of the mother?

____ Same as above.
____ Unemployed
____ Other (describe) _____

8. Please check the appropriate box indicating your total, combined family income for the past twelve (12) months:

____ under $5,000
____ $5,000-9,999
____ $10,000-$14,999
____ $15,000-19,000
____ $20,000 and over

9. What is the hearing loss of your son/daughter:

Right Ear: ____ Normal ____ Mild ____ Moderate ____ Severe ____ Profound

Left Ear: ____ Normal ____ Mild ____ Moderate ____ Severe ____ Profound

10. At what age was your son/daughter when you discovered his/her hearing loss?
____ At birth
____ Years of age

11. At what age did your son/daughter lose his/her hearing?
____ At birth
____ Years of age
____ Age hearing was lost is unknown.

12. Cause of child's hearing loss: _____

____ Cause cannot be determined.

If onset at birth, what was the probable cause? (check all that apply)

____ Maternal rubella
____ Trauma at birth
____ Other complications of pregnancy
____ Prematurity
____ Heredity
____ Other (specify) _____

13. What methods of communication do you use most often when communicating with your hearing impaired son/daughter?

____ Speech ____ Fingerspelling
____ Sign Language ____ Writing ____ Gestures
____ Other (Describe) _____

14. What methods of communication does your hearing impaired son/daughter use when he/she communicates with you?

____ Speech ____ Fingerspelling
____ Sign Language ____ Writing ____ Gestures
____ Other (Describe) _____

15. Have you had any formal training on how to communicate with your son/daughter? ____ Yes ____ No

If yes, who provided the training? _____

16. What did you like about your son's/daughter's secondary educational program?

_____

17. What did you dislike about your son's/daughter's secondary educational program?

_____

18. Were you ever informed about the educational or vocational programs available to your son/daughter? ____ Yes ____ No

If yes, who informed you? _____

19. Do you feel your son/daughter had enough information for selecting a senior high program in college prep or vocational education? If yes, explain the type of information received.

_____

_____

20. Do you feel your son's/daughter's vocational training in senior high was adequate for today's job market? If yes, explain why you feel training was adequate.

_____

_____

If no, explain why you feel it was not adequate. _____

_____

21. Is your son/daughter now self-supportive? ____ Yes ____ No

If no, explain why. _____

22. Do you feel there is a need for follow-up services to help your son or daughter to advance and obtain a better job? If yes, what type of services should be given?

_____

_____

23. Does your son/daughter drive a car? ____ Yes ____ No

If yes, who trained him/her to drive? _____

24. Does your son/daughter own a car? ____ Yes ____ No

25. What mode of transportation does your son/daughter use to travel to work?

_____

26. How would you describe your present relationship with your son/daughter?

____ Very Successful
____ Somewhat Successful
____ Somewhat Unsuccessful
____ Very Unsuccessful

EMPLOYER SURVEY *
(For the Follow-up Study of Former Vocational
Students Classified as Hearing Impaired)

Employer: _____

Address: _____
Street City State Zip Code

Telephone: _____ Date: _____

No. of employees: _____

No. of hearing impaired employed: _____

Employee: _____

Interviewer: _____

Entry job: _____

1. Was he/she properly trained? (high school program)
   A. Skillwise _____
   B. On appropriate equipment _____
   C. Additional training needed _____

2. Was job reengineered? ____ Yes ____ No
   To what extent? _____

3. What relationship is there between the disability and job employee is performing?
   _____

4. Has employee made any advancement?
   A. Skillwise _____
   B. Job classification _____
   C. Salary _____

*Source: G. Powers and J. Lewis. 1970-1975 Follow-up of Hearing Impaired Graduates of Pennsylvania (Bloomsburg, Pennsylvania: Bloomsburg State College, 1976).

5. Success of our graduates in comparison to hearing workers:

| | Good | Average | Poor |
|---|---|---|---|
| A. Quality of work | ( ) | ( ) | ( ) |
| B. Quantity of work (productivity) | ( ) | ( ) | ( ) |
| C. Handling of equipment | ( ) | ( ) | ( ) |
| D. Attention to work | ( ) | ( ) | ( ) |
| E. Attitude toward work and initiative | ( ) | ( ) | ( ) |
| F. Attitude toward supervision | ( ) | ( ) | ( ) |
| G. Relations with co-workers | ( ) | ( ) | ( ) |
| H. Accident rate | ( ) | ( ) | ( ) |
| I. Absenteeism | ( ) | ( ) | ( ) |

6. Would you consider employing another hearing impaired/handicapped person? ____ Yes ____ No

7. If answer is yes, what kind of job? _____

8. If answer is no, why not? _____

9. Have you had previous experience with the hearing impaired/handicapped other than this employee? ____ Yes ____ No
What? _____

10. Do you employ other handicapped workers? ____ Yes ____ No
_____ Number

11. How did you find this person for employment? (Agency, Friend, Newspaper, School, etc.)
_____

12. Do you feel the hearing impaired individual has had a problem socially adjusting within the company? ____ Yes ____ No
If yes, what steps were taken to help with the problem?
_____

DF-6

THE CENTER FOR VOCATIONAL AND TECHNICAL EDUCATION
THE OHIO STATE UNIVERSITY

# INITIAL FOLLOW-UP SURVEY OF FORMER VOCATIONAL STUDENTS

**Student and Vocational Program Identification**

**Your Social Security Number** ___-___-____

**Is Your Name and Address Correct as Printed Above?**
**If not, please print the corrected information below:**

New Name ___ ___ ___

6. If you got a full-time job when you left this vocational program:

What was your job? _____

For State Use Only

7. How closely did your first full-time job (30 or more hours per week) after leaving this vocational program relate to the training you received?

Check only one box

1 ☐ I was employed in the occupation for which I was trained by this vocational program
2 ☐ I was employed in a related occupation
3 ☐ I was employed in a completely different occupation

8. Did this vocational training program adequately prepare you for your first full-time job after leaving this training?

☐ Yes ☐ No

9. What was your beginning hourly wage on your first full-time job since leaving this vocational program?

Check only one box

1 ☐ $1.59 or less per hour
2 ☐ $1.60 to $1.99 per hour
3 ☐ $2.00 to $2.49 per hour
4 ☐ $2.50 to $2.99 per hour
5 ☐ $3.00 to $3.99 per hour
6 ☐ $4.00 or more per hour

10. How did you get your first full-time job after leaving this vocational training?

Check appropriate box or boxes below

☐ I got the job myself
☐ My family or friends helped me get the job
☐ The job placement services provided by the school helped me get the job
☐ The state employment service helped me get the job
☐ A private employment agency helped me get the job
☐ Other (specify) _____

11. What is the most you have earned on a full-time job since leaving this program?

Check only one box

1 ☐ $1.59 or less per hour
2 ☐ $1.60 to $1.99 per hour
3 ☐ $2.00 to $2.49 per hour
4 ☐ $2.50 to $2.99 per hour
5 ☐ $3.00 to $3.99 per hour
6 ☐ $4.00 or more per hour

12. If you have held two or more full-time jobs (30 or more hours per week) since you ended this vocational training, check one box below.

1 ☐ I was trained in school for my last job
2 ☐ My last job was related to this vocational training
3 ☐ My last job was not at all related to this vocational training

13. Indicate below the location of your present or most recent full-time employment.

_____
Village, Town, City

_____
County

_____
State

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14. If you are presently working, what is your job?

_____

For State Use Only

15. What wages are you presently earning?

Check only one box

1 ☐ $1.59 or less per hour
2 ☐ $1.60 to $1.99 per hour
3 ☐ $2.00 to $2.49 per hour
4 ☐ $2.50 to $2.99 per hour
5 ☐ $3.00 to $3.99 per hour
6 ☐ $4.00 or more per hour
7 ☐ I am unemployed

16. What is your current employment status?

Check the appropriate box or boxes below

☐ I am employed
  ☐ full-time (30 or more hours per week)
  ☐ part-time (less than 30 hours per week)
☐ I am unemployed,
  ☐ but looking for work
  ☐ and not looking for work
☐ I am in the military service

1971

17. As best you know, what type(s) of **job placement service(s)** were provided by the school and the vocational program in which you were enrolled?

49 ☐ A school placement service coordinated with the State Employment Service
☐ Vocational Teachers helped place students in jobs by making referrals
☐ Guidance Counselors helped students find jobs
☐ Other (specify)
☐ School had no placement services

18. After you got your **first** job (full-time or part-time) following this vocational training, have you ever again used any of the **job placement services** provided by the school or this vocational program?

☐ Yes ☐ No

If yes, check the service(s) you have used since getting your first job

☐ Coordinated service provided by school and state employment service
50 ☐ Vocational teacher assistance
☐ Guidance counselor assistance
☐ Other (specify)

19. How many separate vocational courses did you take while enrolled in this vocational program?

___ Courses
51

20. Did you enroll in this vocational program with the specific purpose in mind of getting skill training in order to get a job in this field.

☐ Yes ☐ No

21. Were you **satisfied** with the vocational training you received in this program?

☐ Yes ☐ No

22. Would you **recommend** this vocational program to others?

☐ Yes ☐ No

23. Since you left this vocational program, have you enrolled in any **additional education** program(s)?

52 ☐ Yes ☐ No

(CONTINUED NEXT COLUMN)

23. Continued.

If yes, check type(s) and purpose(s) below:

53 ☐ **General education program(s)**
☐ To raise my general education level
☐ Informal, noncredit course(s)

☐ **Vocational program(s)**
☐ To upgrade the vocational skills previously learned in this program
☐ To learn a new occupation

What type(s) of vocational training program(s) did you attend?

☐ Private school(s)
☐ Public school(s)
67 ☐ Business or industry

24. If you did enroll for additional education after leaving this vocational program, have you received (or do you expect to receive) one or more of the following:

☐ Yes ☐ No

If yes, check type(s)

☐ A certificate (type) _____
70 ☐ A diploma (type) _____
☐ A 2-year associate degree (major) _____
☐ A 4-year college degree (major) _____
☐ Other (specify) _____

25. Are you **now** enrolled in a **vocational** program?

☐ Yes ☐ No

26. Are you **now** enrolled in any **educational** program(s) other than vocational?

☐ Yes ☐ No

27. Are you interested in getting **more vocational** training?

☐ Yes ☐ No.

28. Are you interested in getting **more general** education?

77 ☐ Yes ☐ No

29. If you are interested in getting **more training** of **any kind**, indicate the type you are interested in:

Continued on Next Page

79 For State Use Only

Your ideas and reactions in response to these questions would be appreciated.

**Your comments will be kept strictly confidential.**

30. What specific things about this vocational program have you found to be the most useful to you in your present job?

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31. What specific things about this vocational program have you found to be the least useful to you in your present job?

For State Use Only

32. Based on your experiences, what suggestions do you have for improving this vocational program?

For State Use Only

Department of Vocational &
Technical Education
University of Minnesota

(1) 0 7 (3) (8) (11) (13)

PLEASE LEAVE ALL RED SQUARES BLANK

Date (14) Month (17) Year

# FOLLOW-UP QUESTIONNAIRE

*ALL RESPONSES WHICH YOU GIVE WILL BE KEPT STRICTLY CONFIDENTIAL*

GENERAL DIRECTIONS: Please complete ALL sections that apply. When you have completed the form return it in the enclosed return-addressed, stamped envelope. Your frank response is very important in order that the area vocational-technical institutes may continue to improve their programs.

## I. PERSONAL INFORMATION

A. Name _____ (Last) (First) (Middle) B. Soc. Sec. No. (18) (26)

C. Present Address _____ (Street or Rural Route)

_____ (City) (State) (zip code)

D. Home Phone _____ (area code) Work Phone _____ (area code)

## II. ADDITIONAL TRAINING

A. Since attending the area vocational-technical institute, what further educational training have you taken part in? (You may check more than one.)

(27) [1] None

(28) [1] On-the-job training (employer-sponsored training program)

(29) [1] Public area vocational school programs

(30) [1] Private vocational programs

(31) [1] University, college and/or junior college programs

(32) [1] Apprenticeship

(33) [1] Specialized occupational military training

(34) [1] Other _____ (specify)

## III. EMPLOYMENT INFORMATION – Present status

A. Are you presently employed, unemployed or unavailable for employment? (Check *only* one of employed, unemployed, or unavailable for employment.)

(35)

[ ] Employed

[ ] Unemployed (You are actively looking for a job but cannot find one.)

[ ] Unavailable for employment (You cannot accept a job for one of the following reasons. Please check appropriate reason.)

(36)

[1] Military

[2] Further training or education

[3] Illness

(36)

[4] Housewife or pregnancy

[5] Presently not working and not interested in employment

[6] Other _____ (specify)

---

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## IV. JOB INFORMATION: (IF YOU HAVE NOT BEEN EMPLOYED AT ANY TIME SINCE GRADUATION FROM THE AREA VOCATIONAL-TECHNICAL INSTITUTE, SKIP TO SECTION IX, p. 4.)

**DIRECTIONS:** 1. If you were employed at any time since graduating from the area vocational-technical institute, *complete the following section of the questionnaire.*

2. Please supply the requested information for each of the following jobs held during the time since graduating from the area vocational-technical institute. (Include names and addresses.)

**(1) First Job** (first job after leaving vocational school)

(37) (41) ☐☐☐☐☐

(42) (44) ☐☐☐

(45) (46) ☐☐

Firm Name _____

Firm Address _____

_____

City _____

Job Title _____

Job Duties _____

_____

Immediate Supervisor _____

Check one: (47)

☐ 1 Full-time job

☐ 2 Part-time job

Check one:

☐ Job related to training

☐ Job not related to training

Number of *months* in this job since graduation from vocational school (48)(49) ☐☐

**(2) Present Job** (job you are presently employed in. If same as first job, write SAME.)

(50) (54) ☐☐☐☐☐

(55) (57) ☐☐☐

(58) (59) ☐☐

Firm Name _____

Firm Address _____

_____

City _____

Job Title _____

Job Duties _____

_____

Immediate Supervisor _____

Check one: (60)

☐ 1 Full-time job

☐ Part time job

Check one:

☐ Job related to training

☐ Job not related to training

Number of *months* in this job since graduation from vocational school (61)(62) ☐☐

**(3)** How many jobs, including your first and present job, have you had since leaving the area vocational-technical institute? (63) ☐

## V. ADVANCEMENT INFORMATION

A. Have you had a formal advancement in job classification (other than just salary increases) since taking your first job after leaving the area vocational-technical institute?

(64) YES ☐ 1 NO ☐ 2 (64)

B. NOTE: The following item need not be completed if you prefer not to complete it. Please do not include overtime when calculating your monthly salary. (Check the appropriate squares.)

| | Under $250 | 250-299 | 300-349 | 350-399 | 400-449 | 450-499 | 500-549 | 550-599 | 600-649 | 650-699 | 700+ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| First Job Monthly Salary Range | | | | | | | | | | | | (65 66) |
| Present Job Monthly Salary Range | | | | | | | | | | | | (67 68) |
| | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | |

(1) (2)
0 8

## VI. JOB SATISFACTION SURVEY: (IF YOU ARE NOT PRESENTLY EMPLOYED, SKIP TO SECTION VII.)

**DIRECTIONS:** The purpose of this survey is to enable you to express your feelings of satisfaction or dissatisfaction with your present job. Please answer all questions by placing an "X" in the appropriate square.

A. How do you feel about your present job?

(9)
- [1] Like it very much
- [2] Like it somewhat
- [3] Neither like nor dislike it
- [4] Dislike it somewhat
- [5] Dislike it very much

B. Considering the characteristics of your present job, rate the degree to which you are satisfied with each of the following:

| | Satisfied | Not Sure | Dissatisfied | | | Satisfied | Not Sure | Dissatisfied | |
|---|---|---|---|---|---|---|---|---|---|
| 1. Salary | 1 | 2 | 3 | (10) | 7. Pace (speed) of work | 1 | 2 | 3 | (16) |
| 2. Fringe benefits | 1 | 2 | 3 | (11) | 8. Facilities and equipment with which to do the job | 1 | 2 | 3 | (17) |
| 3. Potential for advancement | 1 | 2 | 3 | (12) | 9. Working conditions | 1 | 2 | 3 | (18) |
| 4. Supervision and management | 1 | 2 | 3 | (13) | 10. Variety of work tasks | 1 | 2 | 3 | (19) |
| 5. Co-workers | 1 | 2 | 3 | (14) | 11. Job security | 1 | 2 | 3 | (20) |
| 6. Company policies and practices | 1 | 2 | 3 | (15) | 12. Safety conditions | 1 | 2 | 3 | (21) |

**TRAINING PROGRAM QUESTIONNAIRE:** (IF YOU ARE PRESENTLY EMPLOYED OR HAVE BEEN EMPLOYED AT ANY TIME DURING THE YEAR SINCE GRADUATION FROM THE AREA VOCATIONAL-TECHNICAL INSTITUTE, COMPLETE THIS SECTION OF THE QUESTIONNAIRE.)

**DIRECTIONS:** Please answer all of the following questions concerning the quality of the curriculum and the quality of the facilities and equipment associated with the program from which you graduated. Place an "X" in the appropriate square.

## VII. CURRICULUM

A. In light of your experience on the job, how do you feel about the training you received in basic job-related (performance) skills at the area vocational-technical institute?

(22)
- [1] Excellent
- [2] Very good
- [3] Adequate
- [4] Inadequate

B. In light of your experiences on the job, how do you feel about the training you received in job-related general technical knowledge at the area vocational-technical institute?

(23)
- [1] Excellent
- [2] Very good
- [3] Adequate
- [4] Inadequate

## VIII. FACILITIES AND EQUIPMENT

A. The equipment at the area vocational-technical institute in my training area was such that:

(24)
- [1] I found it very easy to adapt to the equipment on the job.
- [2] I had some problems adapting to the equipment on the job.
- [3] I found it very difficult to adapt to the equipment on the job.

B. In comparison to the facilities and equipment used on your present job, how would you rate your area vocational-technical institute facilities and equipment?

(25)
- [1] Area vocational-technical institute facilities and equipment were superior to those on the job.
- [2] Area vocational-technical institute facilities and equipment were similar to those on the job.
- [3] Area vocational-technical institute facilities and equipment were inferior to those on the job.

THIS SECTION IS TO BE COMPLETED BY ALL

**DIRECTIONS:** Please answer all of the following questions concerning the quality of instruction and the quality of the school and community services associated with the school from which you graduated. Place an "X" in the appropriate square.

## IX. INSTRUCTION

A. How would you rate the teaching quality of instructors in your training program at the area vocational-technical institute?

(26) [1] Most of the instructors taught very well.
(26) [2] About the same number taught well as did not.
(26) [3] Most of the instructors did not teach well.

B. How would you rate the knowledge your instructors at the area vocational-technical institute possessed about their field?

(27) [1] Most were very knowledgeable.
(27) [2] About the same number were knowledgeable as were not.
(27) [3] Most were not knowledgeable.

C. How would you rate the interest shown by your instructors in your work progress at the area vocational-technical institute?

(28) [1] Most instructors were very interested in my progress.
(28) [2] Most instructors were somewhat interested in my progress
(28) [3] Most instructors did not seem interested in my progress.

D. How would you rate the extent to which your instructors at the area vocational-technical institute were up-to-date in their fields?

(29) [1] Most instructors were up-to-date.
(29) [2] About the same number were up-to-date as were not.
(29) [3] Most instructors were not up-to-date.

X. If you could start all over again, would you choose the same training program you received training in at the area vocational-technical institute?

YES (30) [1] NO (30) [2]

## XI. SCHOOL AND COMMUNITY SERVICES

A. Who was the *greatest* help to you in securing your first job? (Check one.)

(31) [1] Instructor, or other area vocational-technical institute personnel
[2] Private employment agency
[3] Relatives or friends
(31) [4] State employment agency
[5] Other _____ (specify)
[6] Does not apply (I have not been employed during the year)

B. How would you rate the *quality* of the following services as provided by the *area vocational-technical institute*? If you did not take advantage of the service, or if the service was not available, check "does not apply." (Please check only one square for each item.)

| | Excellent | Good | Poor | Does not apply | |
|---|---|---|---|---|---|
| 1. Job Placement | [1] | [2] | [3] | [4] | (32) |
| 2. Counseling with personal problems | [1] | [2] | [3] | [4] | (33) |
| 3. Help in making career decisions | [1] | [2] | [3] | [4] | (34) |
| 4. Help in securing part-time employment | [1] | [2] | [3] | [4] | (35) |
| 5. Help in obtaining financial assistance | [1] | [2] | [3] | [4] | (36) |
| 6. Help in securing housing | [1] | [2] | [3] | [4] | (37) |
| 7. Youth organizations | [1] | [2] | [3] | [4] | (38) |
| 8. Recreational programs | [1] | [2] | [3] | [4] | (39) |
| 9. Study, library and other learning resource facilities | [1] | [2] | [3] | [4] | (40) |
| 10. Health services | [1] | [2] | [3] | [4] | (41) |

C. How would you rate the *quality* of the services and facilities provided by the *community* in which the vocational school is located? (Check appropriate square for each of the items.)

| | Excellent | Good | Poor | Does not apply | |
|---|---|---|---|---|---|
| 1. Housing | [1] | [2] | [3] | [4] | (42) |
| 2. Job opportunities | [1] | [2] | [3] | [4] | (43) |
| 3. Recreation facilities | [1] | [2] | [3] | [4] | (44) |

Department of Vocational & Technical Education
University of Minnesota

_____ 19____

*ALL RESPONSES YOU GIVE WILL BE KEPT STRICTLY CONFIDENTIAL*

## EMPLOYER QUESTIONNAIRE

DIRECTIONS: Please complete ALL sections of this form even if the employee no longer works for your firm. When you have completed the form return it in the enclosed return-addressed, stamped envelope. Your responses will in no way affect the employee.

### I. PERSONAL INFORMATION

A. Employee name _____
(Last) (First) (Middle)

B. Indicated Employer _____ City _____

### II. EMPLOYMENT INFORMATION

If the employee has worked or works for your firm, please have a supervisor familiar with the work of the employee fill out this questionnaire.

Employee's Job Description _____

Supervisor's Name _____ Date _____
(Last) (First) (Middle)

Supervisor's Position _____

*PLEASE COMPLETE REMAINING PORTIONS OF THIS QUESTIONNAIRE*

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(1) 0 9 (3) (8) (11) (12) (leave blank)

## EMPLOYEE PERFORMANCE SURVEY

DIRECTIONS: Please indicate your satisfaction with the employee as compared with other workers in the same work group. If the worker is the only person employed with your firm, compare him with others who have worked in the same position. This information will be kept strictly confidential. Please respond to all questions.

I. Total number of *months* employee has been employed by your firm ... [ ][ ] (13-14)

PLEASE RESPOND TO THE FOLLOWING QUESTIONS BY PLACING AN "X" IN THE APPROPRIATE SQUARE

II. In comparison with other workers in the same work group, how would you rate the employee on each of the following characteristics?

| | above average | about average | below average | |
|---|---|---|---|---|
| 1. The quality of employee's work | 1 | 2 | 3 | (15) |
| 2. The quantity of employee's work | 1 | 2 | 3 | (16) |
| 3. The degree to which the employee possesses specific job-related knowledge important to success on this job | 1 | 2 | 3 | (17) |
| 4. The degree to which the employee is able to operate the equipment and apparatus used on the job | 1 | 2 | 3 | (18) |
| 5. The degree to which the employee possesses basic reading, verbal and computational skills | 1 | 2 | 3 | (19) |

III. In comparison to others in the employee's work group, how would you rate the employee on each of the following characteristics?

| | above average | about average | below average | |
|---|---|---|---|---|
| 1. Willingness to accept responsibility | 1 | 2 | 3 | (20) |
| 2. Punctuality | 1 | 2 | 3 | (21) |
| 3. Ability to work without supervision | 1 | 2 | 3 | (22) |
| 4. Willingness to learn and improve | 1 | 2 | 3 | (23) |
| 5. Cooperation with co-workers | 1 | 2 | 3 | (24) |
| 6. Cooperation with management | 1 | 2 | 3 | (25) |
| 7. Compliance with company policies, rules, and practices | 1 | 2 | 3 | (26) |
| 8. Work attendance | 1 | 2 | 3 | (27) |

IV. In comparison with other workers in the same work group, how would you rate the employee's over-all competency, effectiveness, proficiency, general over-all work attitudes, and other elements of successful job performance?

(28)

[1] In the top 1/4

[2] In the top 1/2 but not among the top 1/4

[3] In the bottom 1/2 but not among the lowest 1/4

[4] In the lowest 1/4

STATE _____ REPORTING PERIOD

**COMPLETER/LEAVER FOLLOW-UP FORM**

NOTE: This report is authorized by law (20 USC 2317 and 20 USC 2391). While you are not required to respond to this survey, your cooperation is needed to insure that the results of this effort are comprehensive, reliable, and timely. (This is to illustrate the data items necessary to be reported to NCES only and therefore must be included in the design of your own forms.)

1. What is your current education status? (Check one)
   - Currently attending school
   - Not currently attending school

2. What is your current employment status? (Check one)
   - Employed (Includes all employment, even if below your qualifications; does not include full-time military service.)
   - Full-time military service
   - Unemployed (Not employed, but actively seeking employment.)
   - Not in the labor force (Not employed and not seeking employment because of choice, illness, full-time student status, retirement, pregnancy, or other such reason.)

NOTE: If you are currently employed, please answer the remaining questions. Otherwise, skip the remaining items.

3. Please provide the following information on your present job:
   Name of Company or Firm (if self-employed, please write self)

   Company or Firm Mailing Address

   City State Zip Code

   Your Immediate Supervisor
   Last Name First Name M.I

   PRESENT JOB INFORMATION
   Job Title
   Job Duties

4. Is this job related to your field of vocational training?
   - Yes, it is directly or closely related
   - No, it is only remotely related or is not related at all

5. What is your current salary? (Do not add in overtime)
   $ per

6. The salary in the preceding item is based on how many hours per week employment?
   hours per week

Thank you very much for your cooperation. Please return this form in the enclosed envelope.

NCES Form 2404-5, Page 1 of 1 This report is authorized by PL 94-482 (20 USC 2391)

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Source: National Center for Education Statistics, Vocational Education Data System, Department Health Education and Welfare. Note this form is subject to final approval from the Office of Management and Budget.

FOR OFFICE USE ONLY

STATE _____ REPORTING PERIOD _____

## EMPLOYER FOLLOW-UP FORM

NOTE: This report is authorized by law (20 USC 2312 and 20 USC 2391). While you are not required to respond to this survey, your cooperation is needed to insure that the results of this effort are comprehensive, reliable, and timely. This form contains no student-identifiable information. The code number in the upper right-hand corner contains information of the program in which the individual was enrolled, the level of the program, and other demographic information which will allow vocational educators to evaluate the effectiveness of their programs. No part of the code contains student identifiers. Please remove the cover letter before returning this form.

**1. VOCATIONAL TRAINING EVALUATION**

Please rate the vocational training received by the individual in the following areas:

| | Very Good | Good | Neutral | Poor | Very Poor |
|---|---|---|---|---|---|
| a. Technical knowledge | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. Work attitude | ☐ | ☐ | ☐ | ☐ | ☐ |
| c. Work quality | ☐ | ☐ | ☐ | ☐ | ☐ |
| | (5) | (4) | (3) | (2) | (1) |

**2. OVERALL RATINGS**

What is your *overall* rating of the vocational training received by this individual as it relates to the requirements of his or her job?

| Very Good | Good | Neutral | Poor | Very Poor |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |
| (5) | (4) | (3) | (2) | (1) |

**3. RELATIVE PREPARATION**

As a result of this person's vocational training, how would you rate his or her preparation in relation to other employees in his or her work group who did not receive such training?

☐ No basis for comparison
(5) ☐ Individual is better prepared
(3) ☐ Both are about the same
(1) ☐ Individual is less prepared

NCES Form 2404-6. Page 1 of 1

This report is authorized by PL 94-482 (20 USC 2391).

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Source: National Center for Education Statistics, Vocational Education Data System, Department Health Education and Welfare. Note this form is subject to final approval from the Office of Management and Budget.

## APPENDIX B

Pre-Follow-up Letter (While in School) to Request Permission for Participation: A Letter for Parents and Students

SCHOOL LETTERHEAD

March 1978

Dear Parent or Guardian:

The XYZ Department of Education and the local area vocational-technical school that your son or daughter attends are very interested in evaluating vocational education with the intent of improving those program offerings for students.

The name of your son or daughter has been selected on a random basis to help complete the study. The information he/she provides will help evaluate the program with the aim of improving its effectiveness.

All information provided by the student is strictly confidential and his/her name will not be associated in any way with the information given.

Your permission is requested to allow your son or daughter to participate in the study where the following instruments will be administered: Exit interview form and a follow-up form, one year after graduation.

Please check the appropriate box below signifying your approval or disapproval of this request, sign the form in the space provided, and return permission form in the enclosed envelope.

Thank you for your valuable assistance in helping to improve this portion of vocational-technical education for youth. You may withdraw your consent at any time. Please feel free to call me if you have any questions about this effort.

Sincerely,

Director of Vocational Education
ABC Area Vocational-Technical School

☐ Permission Granted ☐ Permission Not Granted

_____ _____

Parent/Guardian Signature Date

SCHOOL LETTERHEAD

April 19, 1978

Dear Student:

The XYZ Department of Education and your local AVTS are interested in evaluating vocational education programs currently operating in the school.

Shortly you will be asked to respond to some questions about your attitudes and experiences while in school, and then about six months after leaving school, we will be asking additional questions focusing on your experiences after leaving school. Your cooperation in this study is greatly appreciated. All information you provide is strictly confidential and your name will not be associated with the responses.

Thank you for your time and consideration as this effort is being accomplished. Your guidance counselor or the person conducting the survey session are available to answer any questions you may have concerning the study. Please be informed that you may stop participation in the study at any time.

Sincerely,

Director of Vocational Education
ABC Area Vocational-Technical School

Sirs:

I have read the above about helping to determine how well some portions of the local vocational-technical program have been operating. I understand that all information is strictly confidential and my name will not be associated with the information. I am willing to participate in the study and grant permission to those conducting the study to include me in the session(s).

Signed: _____

Print Name: _____

PERMISSION TO INTERVIEW STUDENT*

Read the following statement to the student:

The ABC vocational school in cooperation with training institutions of the deaf, are conducting a follow-up survey of hearing impaired young adults. This survey is part of an effort to gain much needed knowledge about hearing impaired persons and provide some new insights into methods to improve the educational opportunities for all hearing impaired persons, and to aid in improving their labor market experiences.

We hope that you will assist in our research by allowing me to ask you some questions about your educational program employment experiences. All the information which you give to me will be held strictly confidential and will only be used by those working on the study to prepare statistical summary information. All of the information will be analyzed on a summary basis and no individual or agency will be named.

_____ _____

Student's Name Date

_____ _____

Interviewer's Name Date

EMPLOYERS PERMISSION

Give student the student's copy of the employer form.

"I have read the employer survey form, understand it and give my permission to the interviewer to interview my employer."

_____ _____

Student's Name Date

_____ _____

Interviewer's Name Date

*Source: G. Powers and J. Lewis. 1970-1975 Follow-up of Hearing Impaired Graduates of Pennsylvania (Bloomsburg, Pennsylvania: Bloomsburg State College, 1976).

Dear Parent:

The ABC vocational school is conducting a follow-up survey of hearing impaired young adults. This survey is part of an effort to gain much needed knowledge about hearing impaired persons, and provide some new insights into methods to improve the educational opportunities for all hearing impaired persons, and to aid in improving their labor market experiences.

We hope that you will assist in our research by allowing a qualified interviewer to ask you some questions about your son/daughter's vocational educational program, and employment experiences. All the information which you give to the interviewer will be held strictly confidential and will only be used by those working on the study to prepare statistical summary information. All of the information will be analyzed on a summary basis and no individual or agency will be named.

Please sign and date this letter in the spaces indicated below and return in the enclosed stamped self-addressed envelope. Your cooperation and promptness will be appreciated.

I hereby authorize the ABC vocational school to conduct an interview at my convenience regarding my son/daughter's _____ educational program.

Date _____ Signed _____
Parent

---

*Source: G. Powers and J. Lewis. 1970-1975 Follow-up of Hearing Impaired Graduates of Pennsylvania (Bloomsburg, Pennsylvania: Bloomsburg State College, 1976).

Dear Graduate:

The ABC vocational school is conducting a follow-up survey of hearing impaired young adults. This survey is part of an effort to gain much needed knowledge about hearing impaired persons, and provide some new insights into methods to improve the educational opportunities for all hearing impaired persons and to aid in improving their labor market experiences.

We hope that you will assist in our research by allowing a qualified interviewer to ask you some questions about your educational program. All of the information which you give to the interviewer will be held strictly confidential and will only be used by those working on the study to prepare statistical summary information. All of the information will be analyzed on a summary basis and no individual or agency will be named.

Please sign and date this letter in the spaces indicated below and return in the enclosed stamped self-addressed envelope. Your cooperation and promptness will be appreciated.

I hereby authorize the ABC vocational school to conduct an interview at my convenience regarding my educational program, and employment experiences.

Date _____ Signed _____
Graduate

---

*Source: G. Powers and J. Lewis. 1970-1975 Follow-up of Hearing Impaired Graduates of Pennsylvania (Bloomsburg, Pennsylvania: Bloomsburg State College, 1976).

## APPENDIX C

Dear Graduate: Cover Letter to
Accompany the Follow-up Questionnaire

SCHOOL LETTERHEAD

December 12, 1978

Dear Graduate:

The XYZ Department of Education and the ABC AVTS are very interested in evaluating the vocational education programs in the school.

Your name has been selected to help complete the study. The information you provide will help evaluate these vocational programs with the aim of improving their effectiveness.

Enclosed is a follow-up form which we are asking you to complete and return in the enclosed stamped, self-addressed envelope. All information provided is strictly confidential and your name will not be associated in any way with the information you give. By returning the follow-up form, you are allowing the information to be counted and analyzed.

Thank you for your valuable assistance in helping to improve vocational education for youth. You may withdraw your consent to tabulate the questionnaire responses at any time. Please feel free to call me if you have any questions about this effort.

Sincerely,

Director of Vocational Education
ABC Area Vocational-Technical School

# APPENDIX D

## Employer Follow-up Letters

SCHOOL LETTERHEAD

December 12, 1978

Dear Employer:

The XYZ Department of Education and the ABC Area Vocational School are very interested in evaluating the vocational programs in the school.

Because your company employs vocational education graduates we believe the information you provide will help to evaluate these vocational programs with the aim of improving their effectiveness.

Enclosed is a follow-up form which we are asking you to complete and return in the enclosed stamped, self-addressed envelope. All information provided is strictly confidential and your name will not be associated in any way with information you give.

Thank you for your valuable assistance in helping to improve vocational education for youth. You may withdraw your consent to tabulate the questionnaire responses at any time. Please feel free to call me if you have any questions about this effort.

Sincerely,

Director of Vocational Education
ABC Area Vocational School

SCHOOL LETTERHEAD

December 26, 1978

Dear Employer:

About two weeks ago we mailed you a follow-up form concerning the evaluation of vocational education at the local area vocational-technical school. At that time we stated that all information provided is strictly confidential.

Many other employers and community contact persons have completed and returned their follow-up forms. It seems these people have welcomed the opportunity to help evaluate the vo-tech school's program. However, according to our records, you have not returned the follow-up form as yet.

Because a high rate of response is essential to the study's accuracy, we again ask for your assistance. Won't you please help us improve the vocational education at the local vo-tech school by completing the enclosed follow-up forms and mailing them to us?

For your convenience again, we have enclosed an addressed, postage paid envelope. If you have completed it and it is on its way, thank you for doing so.

Yours truly,

Director of Vocational Education
ABC Area Vocational-Technical School

## APPENDIX E

Student Follow-up Letter - Third Mailing

ABC AVTS FOLLOW-UP

Third Mailing

HELP! we're looking for a MISSING follow-up form. If you've returned your follow-up form, you've already helped and don't need to read the rest of this message.

You are only one person, but one person can really make a difference. You can still help us by returning your completed follow-up form today.

Thank you.

Yours truly,

Vocational Teacher
ABC Area Vocational Technical School

P.S. Because we need to keypunch the information during the week of January 23rd, I would appreciate your sending the completed follow-up form in by then. A mailing label is enclosed for your convenience. Thanks.

## Appendix F

OE Instructional Codes and Titles Conversion Table: SOC to OE Codes Relating to Vocational Education Programs.

## OE INSTRUCTIONAL CODES AND TITLES

| | |
|---|---|
| 01.0100 | Agriculture Production |
| 01.0200 | Agriculture Supplies/Services |
| 01.0300 | Agriculture Mechanics |
| 01.0400 | Agriculture Products |
| 01.0500 | Ornamental Horticulture |
| 01.0600 | Agriculture Resources |
| 01.0700 | Forestry |
| 01.9900 | Other Agriculture |
| | |
| 04.0100 | Advertising Services |
| 04.0200 | Apparel & Accessories |
| 04.0300 | Automotive |
| 04.0400 | Finance & Credit |
| 04.0500 | Floristry |
| 04.0600 | Food Distribution |
| 04.0700 | Food Services |
| 04.0800 | General Merchandise |
| 04.0900 | Hardware, Building Materials, etc. |
| 04.1000 | Home Furnishings |
| 04.1100 | Hotel & Lodging |
| 04.1200 | Industrial Marketing |
| 04.1300 | Insurance |
| 04.1500 | Personal Services |
| 04.1700 | Real Estate |
| 04.1800 | Recreation & Tourism |
| 04.1900 | Transportation |
| 04.2000 | Retail Trade, other |
| 04.9900 | Other Distributive Education |
| | |
| 07.0101 | Dental Assistant |
| 07.0102 | Dental Hygienist (Assoc.) |
| 07.0203 | Medical Lab. Assisting |
| 07.0299 | Other Med. Lab. Technol. |
| 07.0301 | Nursing, Associate Degree |
| 07.0302 | Practical (Voc.) Nursing |
| 07.0303 | Nursing Assistant (Aide) |
| 07.0399 | Other Nursing |
| 07.0501 | Radiologic Technology |
| 07.0800 | Mental Health Technology |
| 07.0903 | Inhalation Therapy Tech. |
| 07.0904 | Medical Assistant |
| 07.0906 | Health Aide |
| 07.0907 | Medical Emergency Tech. |
| 07.9900 | Other Health Occupations Education |

## OE INSTRUCTIONAL CODES AND TITLES

| | |
|---|---|
| 09.0201 | Care & Guidance of Children |
| 09.0202 | Clothing Mgt., Prod., & Service |
| 09.0203 | Food Mgt., Prod., & Service |
| 09.0204 | Home Furn., Equip., Serv. |
| 09.0205 | Inst. & Home Mgt., & Sup. |
| 09.0299 | Other Occupational Preparation for Homemaking |
| | |
| 14.0100 | Accounting & Computing |
| 14.0201 | Computer & Console Operations |
| 14.0203 | Programmers |
| 14.0299 | Other Business Data Processing |
| 14.0300 | Filing, Office Machines |
| 14.0400 | Info., Communic. Occupations |
| 14.0500 | Materials, Support, Transportation, etc. |
| 14.0600 | Personnel, Training & Related |
| 14.0700 | Steno., Secy., & Related |
| 14.0800 | Supervisory and Admin. Management |
| 14.0900 | Typing & Related |
| 14.9900 | Other Office Occupations Education |
| | |
| 16.0103 | Architectural Technology |
| 16.0104 | Automotive Technology |
| 16.0106 | Civil Technology |
| 16.0107 | Electrical Technology |
| 16.0108 | Electronic Technology |
| 16.0110 | Environmental Control Technology |
| 16.0111 | Industrial Technology |
| 16.0113 | Mechanical Technology |
| 16.0117 | Scientific Data Technology |
| 16.0601 | Commercial Pilot Training |
| 16.0602 | Fire & Fire Safety Technology |
| 16.0605 | Police Science |
| 16.9902 | Water & Waste Water Technology |
| 16.9900 | Other Technical Education |
| | |
| 17.0100 | Air Conditioning |
| 17.0200 | Appliance Repair |
| 17.0301 | Body & Fender Repair |
| 17.0302 | Auto Mechanics |
| 17.0400 | Aviation Occupations |
| 17.0700 | Commercial Art Occupations |
| 17.0900 | Commercial Photography Occupations |
| 17.1001 | Carpentry |
| 17.1002 | Electricity |
| 17.1004 | Masonry |
| 17.1009 | Other Construction & Maintenance |
| 17.1100 | Custodial Services |

## OE INSTRUCTIONAL CODES AND TITLES

| | |
|---|---|
| 17.1200 | Diesel Mechanic |
| 17.1300 | Drafting Occupations |
| 17.1400 | Electrical Occupations |
| 17.1500 | Electronic Occupations |
| 17.1700 | Foremanship, Supervision & Management Development |
| 17.1900 | Graphic Arts Occupations |
| 17.2100 | Instr. Maintenance & Repair |
| 17.2200 | Maritime Occupations |
| 17.2302 | Machine Shop |
| 17.2303 | Machine Tool Operation |
| 17.2305 | Sheet Metal |
| 17.2306 | Welding & Cutting |
| 17.2307 | Tool & Die Making |
| 17.2399 | Other Metalworking Occupations |
| 17.2400 | Metallurgy Occupations |
| 17.2602 | Cosmetology |
| 17.2699 | Other Personal Services |
| 17.2700 | Plastics & Occupations |
| 17.2801 | Fireman Training |
| 17.2802 | Law Enforcement Training |
| 17.2899 | Other Public Services |
| 17.2900 | Quantity Food Occupations |
| 17.3000 | Refrigeration |
| 17.3100 | Small Engine Repair |
| 17.3200 | Sta. Energy Sources Occupations |
| 17.3300 | Textile Production & Fabrication |
| 17.3500 | Upholstering |
| 17.3600 | Woodworking Occupations |
| 17.9900 | Other Trade and Industrial Education |

## CONVERSION TABLE:

## SOC CODES TO OE CODES RELATING TO VOCATIONAL EDUCATION PROGRAMS

### 14 MANAGEMENT RELATED OCCUPATIONS

| | |
|---|---|
| Personnel, Training, and Related Occupations | 14.06 00 |
| Management Development | 17.31 00 |
| Other Related | |

### 17 COMPUTER, MATHEMATICAL, AND OPERATIONS RESEARCH OCCUPATIONS

| | |
|---|---|
| Scientific Data Processing | 16.01 30 |
| Other Related | |

### 29 REGISTERED NURSES

| | |
|---|---|
| Nursing (Associate Degree) | 07.03 01 |
| Other Related | |

### 32 WRITERS, ARTISTS, PERFORMERS AND RELATED WORKERS

| | |
|---|---|
| Commercial Art Occupations | 17.07 00 |
| Graphic Arts | 17.08 01 |
| Custom Drapery and Window Treatment Designer/Maker | 09.05 05 |
| Commercial Photography | 17.05 08 |
| Other Related | |

### 36 HEALTH TECHNOLOGISTS AND TECHNICIANS

| | |
|---|---|
| Dental Hygienists | 07.01 02 |
| Nuclear Medical Technician | 07.02 08 |
| Radiologic Technician | 07.02 07 |
| Practical (Vocational) Nurse | 07.03 02 |
| Medical Laboratory Technician | 07.02 03 |
| Emergency Medical Technician I, II, III | 07.08 01 (& 02, 03) |
| Surgical Technician | 07.03 04 |
| Occupational Therapy Aide | 07.04 02 |
| Respiratory Therapy Technician | 07.02 12 |
| Opthalmic Technician | 07.06 00 |
| Mental Health Technician | 07.08 00 |
| Other Related | |

### 37 ENGINEERING AND RELATED TECHNOLOGISTS AND TECHNICIANS

| | |
|---|---|
| Electrical Technology | 16.01 08 |
| Electronic Technology | 16.01 09 |
| Instrumentation Technology | 16.01 14 |
| Industrial Production Technology | 16.01 13 |
| Mechanical Design Technology | 16.01 25 |
| Metallurgical Technology | 16.01 26 |
| Architectural Technology | 16.01 03 |
| Aeronautical Technology | 16.01 01 |
| Civil Technology | 16.01 07 |
| Electromechanical Technology | 16.01 10 |

| | |
|---|---|
| Automotive Equipment Technology | 16. 01 04 |
| Drafting Occupations | 17. 12 00 |
| Other Related | |

38 SCIENCE TECHNOLOGISTS AND TECHNICIANS

| | |
|---|---|
| Chemical Technology | 16. 01 05 |
| Oceanographic Biological Technology | 16. 05 13 |
| Environmental Control Technology | 16. 01 11 |
| Other Related | |

39 TECHNICIANS: EXCEPT HEALTH AND SCIENCE

| | |
|---|---|
| Programmers | 14. 02 02 |
| Other Related | |

41 SALES OCCUPATIONS, COMMODITIES

| | |
|---|---|
| Floristry & Farm and Garden Supplies Marketing | 04. 05 00 |
| Agricultural Supplies/Services | 01. 02 00 |
| Petroleum Marketing | 04. 16 00 |
| Automotive, Recreational & Agricultural Vehicles & Accessories | 04. 03 00 |
| Apparel and Accessories | 04. 02 00 |
| Home Furnishings Marketing | 04. 10 00 |
| Hardware & Building Materials Marketing | 04. 09 00 |
| Food Marketing | 04. 06 00 |
| General Merchandise Retailing | 04. 08 00 |
| International Marketing | 04. 14 00 |
| Retailing | 04. 22 01 |
| Wholesaling | 04. 22 02 |
| Other Related | |

42 INSURANCE, REAL ESTATE, AND SERVICE SALES OCCUPATIONS

| | |
|---|---|
| Insurance | 04. 13 00 |
| Real Estate Marketing | 04. 17 00 |
| Finance and Credit Services | 04. 04 00 |
| Personal Services Marketing | 04. 15 00 |
| Transportation & Travel Marketing | 04. 19 00 |
| Recreation Marketing | 04. 18 00 |
| Hotel, Motel & Lodging Services | 04. 11 00 |
| Advertising & Display Services | 04. 01 00 |
| Food Services Marketing | 04. 07 00 |
| Other Related | |

45 SUPERVISORS: CLERICAL OCCUPATIONS

| | |
|---|---|
| Clerical and Office Supervisors | 14. 08 04 |
| Other Related | |

46-47 CLERICAL OCCUPATIONS, EXCEPT EQUIPMENT OPERATORS

| | |
|---|---|
| Secretaries | 14. 07 02 |
| Stenographers | 14. 07 03 |
| General Office, Clerical & Related | 14. 03 00 |
| Information Communication & Related Occupations | 14. 04 00 |
| Other Related | |

## 47 BOOKKEEPERS, BILLING, ACCOUNTING AND STATISTICAL CLERKS

| | |
|---|---|
| Accounting and Related Occupations | 14. 02 00 |
| Other Related | |

## 48 COMPUTING AND OFFICE EQUIPMENT OPERATORS

| | |
|---|---|
| Computer and Console Operators | 14. 02 03 |
| Peripheral Equipment Operators | 14. 02 05 |
| Other Related | |

## 51 PROTECTIVE SERVICE OCCUPATIONS

| | |
|---|---|
| Volunteer Fireman | 99. 05 00 |
| Fire and Fire Safety Technology | 16. 05 05 |
| Firefighting Training | 17. 22 01 |
| Police Science Technology | 16. 05 21 |
| Law Enforcement Training | 17. 22 02 |
| Other Related | |

## 52 SERVICE OCCUPATIONS, EXCEPT PRIVATE HOUSEHOLD & PROTECTIVE

| | |
|---|---|
| 521 Food & Beverage Preparation and Service Occupations | |
| Food Management, Productions & Services | 09. 04 00 |
| Quantity Food Occupations | 17. 23 00 |
| Other Related | |
| 523 Health Service Occupation | |
| Dental Assistants | 07. 01 01 |
| Physical Therapy Aide | 07. 04 03 |
| Medical Assistant | 07. 08 05 |
| Environmental Health Assistant | 07. 08 06 |
| Nursing Assistant (Aide, Orderly) | 07. 03 03 |
| Other Related | |
| 524 Cleaning and Building Service Occupations Except Private Households | |
| Custodial Services | 17. 10 01 |
| Other Related | |
| 525 Personal Service Occupations | |
| Barbering | 17. 21 01 |
| Cosmetology | 17. 21 02 |
| Other Related | |
| 526 Child Care Workers, Except Private Households | |
| Child Care & Guidance, Management & Service Occupations | 09. 02 00 |
| Other Related | |

## 55 FARM OPERATORS AND MANAGERS

| | |
|---|---|
| Production Agriculture | 01. 01 00 |
| Agricultural Products, Processing & Marketing | 01. 04 00 |
| Renewable Natural Resources | 01. 06 00 |
| Horticulture | 01. 05 00 |
| Other Related | |

### 57 FORESTRY & LOGGING OCCUPATIONS

| | |
|---|---|
| Forestry Production | 01.07 01 |
| Forestry Technology | 16.05 06 |
| Other Related | |

### 58 FISHERS, HUNTERS, AND TRAPPERS

| | |
|---|---|
| Commercial Fishing | 17.18 01 |
| Other Related | |

### 61 CONSTRUCTION TRADES

| | |
|---|---|
| Masonry (Trowel Trades) | 17.09 02 |
| Carpentry | 17.09 01 |
| Electricity | 17.10 02 |
| Plumbing and Pipefitting | 17.09 10 |
| Other Related | |

### 63-65 TRANSPORTATION OCCUPATIONS

| | |
|---|---|
| Ship and Boat Operation and Maintenance | 17.18 03 |
| Seamanship | 17.18 02 |
| Aviation Occupations | 17.05 00 |
| Commercial Pilot Training | 16.05 03 |
| Other Related | |

### 67 MECHANICS AND REPAIRERS

| | |
|---|---|
| Automotive Mechanic | 17.03 01 |
| Small Engine and Chassis Repair | 17.24 01 |
| Automotive Body Mechanic | 17.04 01 |
| Farm Mechanics | 01.03 00 |
| Motor Repair | 17.03 00 |
| Diesel Equipment Mechanic | 17.11 01 |
| Industrial Atomic Energy | 17.16 00 |
| Stationary Energy Sources Occupations | 17.15 00 |
| Appliance Repair Occupations | 17.02 00 |
| Heating & Air Conditioning | 17.01 01 |
| Cooling & Refrigeration | 17.01 02 |
| Instrument Maintenance & Repair Occupations | 17.17 00 |
| Business Machine Maintenance | 17.06 00 |
| Electronic Occupations | 17.14 00 |
| Other Related | |

### 72 PRECISION PRODUCTION OCCUPATIONS

| | |
|---|---|
| Machine Shop | 17.19 04 |
| Tool and Die Making | 17.19 05 |
| Sheet Metal | 17.19 07 |
| Machine Tool Operation | 17.19 03 |
| Woodworking Occupations | 17.28 00 |
| Alterationist | 09.03 03 |
| Custom Apparel/Garment Seamtress | 09.03 06 |
| Upholstering | 17.27 00 |
| Custom Upholster and Slipcover | 09.05 04 |
| Leatherworking | 17.26 00 |
| Textile Production Fabrication & Maintenance Occupations | 17.25 00 |
| Dental Laboratory Technician | 07.01 03 |
| Other Related | |

## 77 FABRICATOR, ASSEMBLERS, AND HAND FINISHERS

| | |
|---|---|
| Combination Welding | 17. 19 08 |
| Gas Welding | 17. 19 09 |
| Electric Welding | 17. 19 10 |
| Other Related | |

## 99 OCCUPATIONS NOT ELSEWHERE CLASSIFIED

| | |
|---|---|
| Occupation of Homemaking | (09. 01) |
| Other, Unpaid Employment or Volunteer | |

## Appendix G

## Award Winning Follow-up Brochure

# HIGH SCHOOL DROPOUTS.

HIGHLIGHT RESULTS OF A SURVEY OF PHILADELPHIA PUBLIC HIGH SCHOOL PUPILS WHO LEFT SCHOOL IN 1974/75

prepared by the DIVISION OF ADMINISTRATIVE & SURVEY RESEARCH SERVICES | OFFICE OF RESEARCH & EVALUATION

## QUESTIONS FOR DROPOUTS

ARE YOU WORKING?

ARE YOU UNEMPLOYED?

ARE YOU LOOKING FOR WORK?

ARE YOU BACK IN SCHOOL NOW?

ARE YOU IN THE ARMED FORCES?

WHAT WERE YOUR REASONS FOR LEAVING SCHOOL?

WITH WHOM DID YOU TALK ABOUT LEAVING SCHOOL?

THESE RESULTS OF THE FIRST SURVEY OF PHILADELPHIA PUBLIC HIGH SCHOOL DROPOUTS WERE OBTAINED FROM 1,306 RESPONSES

QUESTIONNAIRES WERE MAILED IN SEPTEMBER 1975 TO ALL THE 1974-75 DROPOUTS LISTED IN THE PUPIL DIRECTORY FILE

OF THE 1,306 RESPONDENTS AS OF OCTOBER, 1975

22% WERE WORKING AND NOT ATTENDING SCHOOL

4% WERE WORKING AND ATTENDING SCHOOL

49% WERE UNEMPLOYED

86% OF THE UNEMPLOYED WERE LOOKING FOR WORK

14% WERE NOT WORKING AND NOT LOOKING FOR WORK (DISCOURAGED WORKERS, HOMEMAKERS)

20% WERE BACK IN SOME EDUCATIONAL PROGRAM

9% WERE IN THE ARMED FORCES

## OF THE 341 EMPLOYED RESPONDENTS

ALMOST ONE-THIRD OF THE RESPONDENTS WHO WERE WORKING HELD UNSKILLED JOBS

AN ADDITIONAL 22% WERE IN SERVICE OCCUPATIONS, (WAITRESSES, GUARDS, ETC.)

CRAFTSMEN AND OPERATORS, INCLUDING APPRENTICES, CONSTITUTED 9% OF THE TOTAL

10% WORKED IN OFFICE JOBS

A SLIGHT DIFFERENCE IN HOURLY EARNINGS WAS REPORTED BETWEEN BLACKS ($2.44) AND WHITES ($2.50)

A GREATER DIFFERENCE IN HOURLY EARNINGS EXISTED BETWEEN MALES ($2.58) AND FEMALES ($2.34)

## OF THE 535 UNEMPLOYED RESPONDENTS WHO WERE LOOKING FOR WORK

13% WANTED OFFICE WORK

5% WANTED WORK IN HEALTH SERVICES

14% WANTED JOBS IN SERVICE OCCUPATIONS (I.E., TEACHER AIDES, NURSES AIDES AND NON-TEACHING ASSISTANTS)

41% WANTED ANY KIND OF JOB

## OF THE 252 RESPONDENTS IN SCHOOLS

22% WERE EMPLOYED

63% WERE WORKING FOR THEIR GENERAL HIGH SCHOOL EQUIVALENCY DIPLOMA (GED)

28% WERE ATTENDING PHILADELPHIA STANDARD EVENING HIGH SCHOOLS

23% WERE IN PRIVATE HIGH SCHOOLS

9% WERE IN TECHNICAL OR TRADE SCHOOLS

8% WERE IN FEDERAL PROGRAMS

## WHY DID YOU LEAVE SCHOOL?

OF 1,005 ANSWERS

| | |
|---|---|
| 11% | RETAINED IN GRADE |
| 14 | NEEDED OR GOT A JOB |
| 16 | PREGNANCY, MARRIAGE, OR BABY CARE |
| 12 | PERSONAL OR HOME PROBLEMS |
| 21 | FOUND SCHOOL "BORING AND A HASSLE" |
| 6 | POOR ATTENDANCE, "GOT PUT OUT" |
| 3 | "QUIT - WASN'T LEARNING" |
| 3 | GOVERNMENT SERVICE (JOB CORPS - ARMED SERVICES, ETC.) |
| 2 | LEFT TO GO TO ANOTHER SCHOOL |
| 3 | "GANGS" |
| 4 | DESIRED COURSES NOT AVAILABLE |
| 5 | OTHER |
| 100% | |

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## WITH WHOM DID YOU TALK ABOUT LEAVING SCHOOL?

Almost a third of the respondents said they spoke to no one about their decision to leave school. More than half said they did not talk to any school personnel before they dropped out. More than a third talked to counselors and a fifth talked to other school personnel and family as well. Almost a quarter of these respondents consulted only their families, and almost as many consulted with both family and school personnel.

## THE DROPOUTS 1974-75 THE GRADUATES 1974

HIGHLIGHTS

| | 1974-75 DROPOUTS | 1974 GRADUATES |
|---|---|---|
| EMPLOYED (EXCLUSIVELY) | 22% | 29% |
| MEDIAN HOURLY WAGE | $2.47 | $2.58 |
| UNEMPLOYED - LOOKING FOR WORK | 42% | 10% |
| MILITARY SERVICE | 9 | 2 |
| IN SCHOOL OR COLLEGE | 20 | 56 |
| BLACK | 64 | 54 |
| NON-BLACK | 36 | 46 |
| MALE | 57 | 46 |
| FEMALE | 43 | 54 |

## THE QUESTIONNAIRE... A SIMPLE POST CARD

The survey shows that dropouts, though a more mobile group than graduates (twice as many drop-out questionnaires were undelivered by the Postal Service), and perhaps a group less kindly disposed toward the Philadelphia Public School System, responded to a survey at a rate sufficient to yield an adequate number of responses for analysis purposes. The responses were representative of the group contacted.

PLEASE COMPLETE, TEAR OFF, AND MAIL IMMEDIATELY. THANK YOU

Are you working now? ☐Full time ☐Part time

Type of work _____

Wages $_____ per hour

Are you unemployed? ☐Yes ☐No

Are you looking for work? ☐Yes No

If yes, what kind? _____

Have you had a job since leaving high school? ☐Yes ☐No

If yes, what kind? _____

With whom did you talk about leaving school? (Check all that apply.)

☐Counselor ☐Teacher ☐Principal/Vice Principal

☐Family ☐No one ☐Other

Why did you leave school before graduating? _____

_____

Are you going to school now? ☐Yes ☐No

School _____

Course _____ ☐GED _____ ☐Tech/trade _____

Other _____

NOTICE TO PARENTS OR GUARDIAN:
If the person to whom this is addressed is in the armed forces, please check here ☐

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## CONCLUSIONS

A number of unsolicited comments from the respondents indicated an awareness that they had "messed things up." Although they had been retained in grade one or more times, some dropouts wanted help in returning to school. Many expressed thanks for our interest in them.

The reasons for dismissal coded on the individual school records differ considerably from the reasons given by the dropouts in this survey. Although school records show the students were leaving school to go to work, many of them left because they were dissatisfied with their progress in school. Among the respondents whose records show they left school in order to go to work, 11% reported that their reason for leaving school was that they were retained in grade. An additional 17% of this group said that they left school because it "was boring and a hassle." In fact, only 20% of these respondents stated in the survey that they left school to go to work.

| | 1973-74 DROPOUTS | 1974-75 DROPOUTS |
|---|---|---|
| EMPLOYED (EXCLUSIVELY) | 28% | 22% |
| MEDIAN HOURLY WAGE | $2.21 | $2.47 |
| UNEMPLOYED - LOOKING FOR WORK | 35% | 42% |
| MILITARY SERVICE | 13 | 9 |
| IN SCHOOL OR COLLEGE | 16 | 20 |

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THE SCHOOL DISTRICT OF PHILADELPHIA

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MR. DAVID A. HOROWITZ, Deputy Superintendent for School Services

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Copies of both this summary brochure and a more detailed report are available from the Office of Informational Services, 299-7850.

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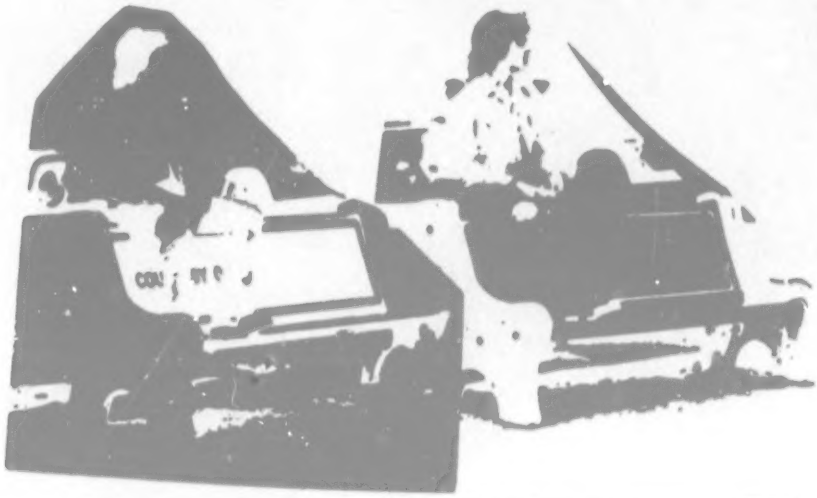
OFFICE OF RESEARCH AND EVALUATION
THE SCHOOL DISTRICT OF PHILADELPHIA

MARCH, 1976





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